PERSONAL PROTECTIVE EQUIPMENT CERTIFICATION

WORK PLACE: Eastern Plating Company

DATE OF EVALUATION: February 13th, 2006

I hereby certify that AMASIA ENTERPRISES, INC. has conducted the workplace hazard assessment for Eastern Plating Co. for Personal Protective Equipment. Included in the assessment was personal protective equipment for eyes, face, head, extremities, protective clothing, respiratory devices and protective shields and barriers.

The required protective equipment shall be provided, used and maintained in a sanitary and reliable condition. Hazards which were considered included all hazards capable of causing injury or impairment in the function of any part of the body through absorption, inhalation or physical contact.

Certified by_____
ANDY A. AMASIA

_____
TITLE

_____
DATE

EASTERN PLATING COMPANY

Comunicacion de Riesgos
June 27, 2008

1. Riesgos de Quimicos

2. Requisitos de capacitacion

3. Etiquetas de advertencia

4. Hojas de datos de seguridad de materiales

5. Informacion del producto

6. Prevencion y proteccion de riesgos

EASTERN PLATING COMPANY

El Equipo de Proteccion Personal(EPP)
June 27, 2008

1. Las diferentes partes de su cuerpo y los diferentes tipos de riesgos requieren diferentes formas de EPP.

2. Identificar los riesgos en su area de trabajo.

3. Proporcionarle el EPP adecuado para protegerle de esos riesgos.

4. Capacitarle en el uso y el cuidado del EPP.

5. Inspeccione el EPP en busca de dano antes y despues de usarlo y limpielo cuando termine de trabajar.

To: Mike Castor

May 5, 2006

From: Rich Panek

NOISE LEVEL SCREENING

On Wednesday, Andy Amasia did a screening test of the noise levels at Baylis Street. Three areas were checked based on the feedback to Andy during the PPE training. This screening was not comprehensive and was done only to determine if we have a potential problem.

The OSHA permissible noise exposure is a weighted average based on the noise level and exposure time. An audiometric testing program is required for all employees whose exposures equal or exceed an 8-hour time weighted average of 85 decibels. Also, engineering controls are required when noise levels reach the levels listed in the table below. If engineering controls are not effective, hearing protection is required. OSHA also requires that compressed air used for cleaning must be reduced to less than 30 psi.

Exposure, hours	Noise Level, dBA
8	90
6	92
4	95
3	97
2	100
1-1/2	102
1	105
½	110
¼ or less	115

The decibel scale is logarithmic; therefore a noise level of 110 is one hundred times the 90 decibel noise level.

Area 1 – MEK AREA
One of the maskers was using compressed air to dry a Ross bezel. The noise level was between 80 and 90 decibels.

Area 2 – DRYING RACK
The first part being dried generated a noise level in the 80-85 decibel range. When the operator dried a process chamber, the noise level jumped to the 110-115 decibel range.

Area 3 – SAND BLASTING AREA
Both blasting cabinets were being used and the radio was on as typical during the working day. The noise level was in the 80-85 decibel range.

OBSERVATIONS

The blowguns that we use are "safety" blowguns that meet the OSHA requirement that nozzle pressure will not exceed 30 psi if the nozzle becomes clogged. The "safety" issue addressed with these blowguns does not address noise levels.

The air pressure at the drying rack and MEK area was 120 psi. I spoke to Jerry about the air pressure and he said that he drops the air pressure to 30 psi; but since this increases drying time the operators increase the air pressure. The air guns by the cleaning tank and tank 17 do not have regulators. The second air gun by the drying rack has a broken pressure gauge.

The first step is to install regulators on the two air guns and replace the pressure gauge on the third. If the operators continue to increase the air pressure above 30 psi, we need to install lockout devices on the regulators. I will survey Pulaski Highway t see if they have similar problems.

We should also install baffles in the sand blasting area since a comprehensive test might indicate that we need to do the audiometric testing required for extended exposure over 85 decibels.

These measures should reduce noise levels below OSHA action levels. After completion, we should ask Andy to do another screening.

Eastern Plating Company
PERSONAL PROTECTIVE EQUIPMENT

JOB TITLE	DUTIES	PPE Required
Line Operations	Plating, Dipping Parts Cleaning	Latex Gloves Safety Glasses* Rubber Aprons Rubber Boots
WasteWater Treatment	Water Treatment	Safety Glasses* Gloves Rubber Aprons
Masking/Painting	Parts painting, Degreasing, Silk screening	Laytex Gloves Safety Glasses* Ventilation
Racker/Unracker	Air Cleaning Air Drying Packaging	Safety Glasses* Dust Mask Work Gloves Coveralls
Laboratory Workers	Lab work	Safety Glasses* Laytex gloves

* SAFETY GLASSES REQUIRED IN ALL WORK AREAS ON SITE

Hazard Communication Program
for
Eastern Plating Company, Inc.
1200 S. Baylis St.
Baltimore, MD 21224

Prepared by:
John Marsh
Acting Technical Director
July 5, 2001

TABLE OF CONTENTS

HAZARD COMMUNICATION PROGRAM
EASTERN PLATING CO., INC.
REVISION: July 5, 2001

1 INTRODUCTION

1.1 Purpose:
The following written hazard communication program has been developed and implemented by:

EASTERN PLATING COMPANY, INC.
1200 S. BAYLIS ST.
BALTIMORE, MD 21224

to comply with the provisions of 29 CFR 1910.1200, and as required by the Maryland Access to Information about Hazardous and Toxic Substances Law, and COMAR 09.12.33

1.2 Scope:
This document describes the actions we have undertaken and policies we have implemented regarding compliance with the above referenced "Right-To-Know" regulations as they relate to our chemical information list, material safety data sheets, labels and employee information, employee training and notification of outside contractors.

1.3 Responsibility:
The Plant Chemist shall be responsible for the maintenance and revision of this document.

1.4 Location:
This program is available in the MSDS book in the Main Office and on file in the Main Office and the Lab.

2 CHEMICAL INFORMATION LIST

2.1 Statutory Requirements:

This section of Eastern Plating Co., Inc.'s Written Hazard Communication Program is intended to satisfy the requirements of Labor & Employment Article, Section 5-405, COMAR 09.12.33 and 29 CFR 1920.1200(e)(1)(l)

2.2 Origination

The Plant Chemist compiled the Chemical Information List.

2.3 Format & Content

In the Presentation of the Report Include the Company Business Address, Contact Person with Title, Telephone, Date of Preparation or Revision and in Tabular Form, List the Chemicals by the following information:

2.3.1 Common Name (Alphabetical Order): The name as it appears on label of the shipping container: drum, bucket, bag, can, bottles, etc.

2.3.2 Chemical Name - List all Hazardous Components

2.3.3 Work Areas - Plant-wide or Lab

2.3.4 Date Added to List

2.4 Availability

2.4.1 Location

The Chemical Information List is available in the MSDS book in the Main Office and on file in the Main Office and in the Lab.

2.4.2 Inspection

The Chemical Information List may be inspected by employees at any reasonable time during the course of normal business hours.

2.4.3 Copies

Copies of the Chemical Information List are available within eight working hours of the request to an employee's supervisor. An employee will be provided a copy or afforded the opportunity to make their own.

2.5 Indoctrination of New Employees

The existence, significance, and location of the Chemical Information List will be covered in the New Employee Orientation.

2.6 Maintenance, Upkeep, Revision, and Re-Submittal

2.6.1 Responsibility

The Chemical Information List will be maintained, updated and revised as specified herein by the Plant Chemist or that individual(s) to whom the responsibility of the duties of Plant Chemist fall.

2.6.2 Frequency

The Chemical Information list will be revised, re-alphabetized, and resubmitted to the Maryland Department of the Environment every two years. This list will be resubmitted on July 1, 2002 and on the bi-annual anniversary of that date in subsequent years.

2.6.3 Submittal

The completed list shall be forwarded to

Maryland Department of Environment
Technical and Regulatory Services Administration
Computer Modeling & Information Management Program
Community Right-To-Know Section
1800 Washington Blvd.
Baltimore MD 21230

2.7 Introductions of Chemicals New to the Facility

2.7.1 Responsibility of Plant Chemist

2.7.1.1 Placement of Initial Order

Upon the placement of the initial order for the procurement of a chemical substances, the Plant Chemist must notify the Procuring Authority that said order is the first and that a Material Safety Data Sheet is to accompany the chemical at the time of delivery to Eastern Plating Co. Inc. All chemicals whether gratis or billed, must be requested through the Procuring Authority and must be ordered via a Purchase Order. The initiation, authorization and/or final approval of this process is the responsibility of the Plant Chemist.

2.7.1.2 Addition to The Chemical Information List

Upon receipt of a new chemical substance to the facility, the Plant Chemist will make the appropriate modifications to the Chemical Information List, incorporating that new substance on the list. This modification may be made as a handwritten entry to the Chemical Information List located in the MSDS

Book with duplicates being kept on file in the Main Office and Lab.

2.7.2 Responsibility of Procuring Authority
When informed by the Plant Chemist that an order for a chemical substance is an "initial order", the Procuring Authority shall specifically request in writing from the supplier or manufacturer that the Material Safety Data Sheet is to accompany the chemical at the time of delivery to Eastern Plating Co. Inc. This shall be noted on the Purchase Order.

2.7.3 Responsibility of Receiving Authority
The Receiving Authority shall realize that it has received a chemical new to the facility when it cross-checks and verifies receipt against a copy of the Purchase Order. At this point the Receiving Authority will confirm that a MSDS has been received with or prior to delivery of the chemical substance. If this is not the case, the Receiving Authority shall immediately request such document from the supplier or manufacturer. Receipt of this document should be via electronic facsimile (fax) machine if possible. The Plant Chemist shall be notified of the receipt of the chemicals once the Receiving Authority has completed their task.

2.8 Procedure for Incorporating into Chemical Information List

Upon receipt of a new chemical substance to the facility, the Plant Chemist will make the appropriate modifications to the Chemical Information List, incorporating that new substance on the list. This modification may be made as a handwritten entry to the Chemical Information List located in the MSDS Book with duplicates being kept on file in the Main Office and Lab.

2.9 Procedure for Notifying Affected Employees of the Introduction of New Chemical Substances.

Employees affected by the introduction of new chemical substances shall be verbally notified by the Plant Chemist of said fact and shall be also be notified by a posting on the Safety Bulletin Board. Such notices shall be displayed for a minimum of two weeks. The Plant Chemist shall also review the new chemical substance its purpose, area of use and storage, its properties and its hazards at the first plant-wide safety meeting convened following the introduction of the new chemical substance.

3. MATERIAL SAFETY DATA SHEETS (MSDS)

3.1 Statutory Requirements:

This section of Eastern Plating Co., Inc.'s Written Hazard Communication Program is intended to satisfy the requirements 29 CFR 1920.1200(g)

3.2 Origination

The Material Safety Data Sheets (MSDS) Notebook was initially compiled under the supervision of the Plant Chemist.

3.3 Availability

3.3.1 Location

The Material Safety Data Sheets (MSDS) are available in the MSDS Notebook in the Main Office and on file in the Main Office and in the Lab.

3.3.2 Inspection

Employees may inspect the Material Safety Data Sheets (MSDS) at any reasonable time during the course of normal business hours.

3.3.3 Copies

Copies of the Material Safety Data Sheets (MSDS) are available within eight working hours of the request to an employee's supervisor, the General Manager or the Plant Chemist. Requests shall be submitted in writing using the *"MSDS Request Form"* copies of which are maintained in the MSDS Binder. Management will grant the employee a copy of the MSDS or afford the employee the opportunity to make their own.

3.4 Indoctrination of New Employees

The New Employee Orientation will address the existence, significance, and location of the Material Safety Data Sheets (MSDS).

3.5 Maintenance, Upkeep, Revision, and Re-Submittal

3.5.1 Responsibility

The Material Safety Data Sheets (MSDS) will be maintained, updated and revised as specified herein by the Plant Chemist or that individual(s) to whom the responsibility of the duties of Plant Chemist fall.

3.5.2 Frequency

The Material Safety Data Sheets (MSDS) will be revised, re-alphabetized by common name, and resubmitted to the Maryland Department of the Environment every two years. This list will be resubmitted on July 1, 2002 and on the biannual anniversary of that date in subsequent years.

3.6 Introductions of Chemicals New to the Facility

3.6.1 Responsibility of Plant Chemist

3.6.1.1 Placement of Initial Order

Upon the placement of the "initial order" for the procurement of a chemical substances, the Plant Chemist must notify the Procuring Authority that said order is the first and that a Material Safety Data Sheet is to accompany or precede the chemical at the time of delivery to Eastern Plating Co. Inc. All chemicals whether gratis or billed, must be requested through the Procuring Authority and must be ordered via a Purchase Order. The initiation, authorization and/or final approval of this process is the responsibility of the Plant Chemist.

3.6.1.2 Addition to The Material Safety Data Sheets (MSDS)

Upon receipt of a new chemical substance to the facility, the Plant Chemist will make the appropriate modifications to the Material Safety Data Sheets (MSDS) Notebook, incorporating that new substance's Material Safety Data Sheets (MSDS) in the MSDS Notebook.

3.6.1.3 Responsibility of Procuring Authority

When informed by the Plant Chemist that an order for a chemical substance is an "initial order", the Procuring Authority shall specifically request in writing from the supplier or manufacturer that the Material Safety Data Sheet is to accompany or precede the chemical at the time of delivery to Eastern Plating Co. Inc. This shall be noted on the Purchase Order.

3.6.2 Responsibility of Receiving Authority

The Receiving Authority shall realize that it has received a chemical new to the facility when it cross-checks and verifies receipt against a copy of the Purchase Order. At this point the Receiving Authority will confirm that a MSDS has been received with or prior to delivery of the chemical substance. If this is not the case, the Receiving

Authority shall immediately request such document from the supplier or manufacturer. Receipt of this document should be via electronic facsimile (fax) machine if possible. The Plant Chemist shall be notified of the receipt of the chemicals once the Receiving Authority has completed their task.

3.6.3 Procedure for Incorporating Into Material Safety Data Sheets (MSDS) Notebook

Upon receipt of a new chemical substance to the facility, the Plant Chemist will make the appropriate modifications to the Material Safety Data Sheets (MSDS) Notebook, incorporating that new substance's Material Safety Data Sheets (MSDS) in the MSDS Notebook.

3.6.4 Procedure for Notifying Affected Employees of the Introduction of New Chemical Substances.

Employees affected by the introduction of new chemical substances shall be verbally notified by the Plant Chemist of said fact and shall be also be notified by a posting on the Safety Bulletin Board. Such notices shall be displayed for a minimum of two weeks. The Plant Chemist shall also review the new chemical substance its purpose, area of use and storage, its properties and its hazards at the first plant-wide safety meeting convened following the introduction of the new chemical substance.

4. LABELS

4.1 Statutory Requirements:

This section of Eastern Plating Co., Inc.'s Written Hazard Communication Program is intended to satisfy the requirements 29 CFR 1920.1200(f).

4.2 Incoming Containers

4.2.1 Responsibility

The Plant Chemist is responsible for ensuring that all incoming containers are properly labeled.

4.2.2 Requirements

4.2.2.1 All labels on incoming containers must contain:

4.2.2.1.1 The identity of the container contents

4.2.2.1.2 The manufacturers's name and address

4.2.2.1.3 Specific target organ hazard warning

4.2.2.2 All labels must be:

4.2.2.2.1 Legible

4.2.2.2.2 Written in English

4.2.2.2.3 Prominently displayed on each container

4.3 In-Plant Containers

4.3.1 Responsibility

The Plant Chemist is responsible for ensuring proper labeling of in-plant containers.

4.3.2 Requirements

4.3.2.1 Permanent Containers (Tanks):

4.3.2.1.1 All tanks shall be identified by Placards and/or Labels which shall collectively include the following information:

4.3.2.1.1.1 Common Name (Proprietary or Commodity); i.e. DW-560; Sulfuric Acid as it appears on the container from which it originated.

4.3.2.1.1.2 Concentration: i.e. DW-560 20% by volume; Chromic Acid 10 oz/gal

4.3.2.1.1.3 Operating Temperature Parameters

4.3.2.1.1.4 HIMG Rating for Health, Flammability,

Reactivity, and Protective Equipment, if applicable, as it appears on the Container from which it Originated or as determined appropriate by the Plant Chemist.

4.3.2.1.1.5 DOT Hazard Warning: Appropriate Warning Label as it appears on the Container from which it Originated or as determined by the Plant Chemist. This would include:

4.3.2.1.1.5.1 Corrosive
4.3.2.1.1.5.2 Oxidizer
4.3.2.1.1.5.3 Flammable

4.3.3 Permanent Container (Tanks) Identification System The Plant Chemist will devise and maintain a system to provide the following:

4.3.3.1 Numeric Identification of Tanks

4.3.3.2 Scaled, Graphic Representation of Chemical Process Area Layout Depicting Process Tanks Identified by Common and Numeric Name.

4.3.3.3 Tabular Index of Tanks which contains the following information:

4.3.3.3.1 Tank Name
4.3.3.3.2 Tank Number
4.3.3.3.3 Tank Size in Gallons
4.3.3.3.4 Chemical Constituents
4.3.3.3.5 Constituent Manufacturer
4.3.3.3.6 Maximum Concentration of Constituents
4.3.3.3.7 Hazardous Components of Chemical Constituents
4.3.3.3.8 Hazardous Components of Chemical Constituents
4.3.3.3.9 Concentrations
4.3.3.3.10 Target Organ Hazard Warning for Chemical Constituents
4.3.3.3.11 HMIG Health Rating of Tank Contents
4.3.3.3.12 DOT Hazard Equivalents of Tank Contents

4.3.2.2 Portable Containers (Buckets, Carboys, Jars, Cans)

4.3.2.2.1 All portable containers which are used for direct transfer of chemicals from one vessel to another are not required to be labeled so long as that transfer is completed immediately without any unattended temporary in-transit storage of the material. If a container is used to store a chemical substance for any period of time in an unattended fashion, suitable labels are to be placed on the containers.

4.3.2.2.2 Labels shall include the following:

4.3.2.2.2.1 Common Name (Proprietary or Commodity); i.e. DW-560; Sulfuric Acid as it appears on the Container from which it Originated.

4.3.2.2.2.2 Concentration: i.e. DW-560 20% by volume; Chromic Acid 10 oz/gal

4.3.2.2.2.3 HIMG Rating for Health, Flammability, Reactivity, and Protective Equipment, if applicable, as it appears on the Container from which it Originated or as determined appropriate by the Plant Chemist.

4.3.2.2.2.4 DOT Hazard Warning: Appropriate Warning Label as it appears on the Container from which it Originated or as determined by the Plant Chemist. This would include:

4.3.2.2.4.1 Corrosive
4.3.2.2.4.2 Oxidizer
4.3.2.2.4.3 Flammable

5. OUTSIDE CONTRACTORS

5.1 Responsibility

The Plant Chemist, Shop Foreman or General Manager are responsibility to provide outside contractors with the appropriate information.

5.2 Notice to Contractors

Contractors shall be notified of the following items as they pertain to the risk of exposure that the contractor may receive within the scope of his assign work duties.

- 5.2.1 Hazardous chemicals to which they may be exposed while in the workplace and their location.
- 5.2.2 Measures to lessen the possibility of exposure.
- 5.2.3 Explanation of labels.
- 5.2.4 Location of MSDS's for hazardous chemicals.
- 5.2.5 Procedures to follow if they are exposed:
  - 5.2.5.1 Appropriate Counter-Measures
  - 5.2.5.2 Locations of Eye Washes and Safety Showers
  - 5.2.5.3 Persons to Contact

6 EMPLOYEE INFORMATION AND TRAINING

6.1 Statutory Requirements:

This section of Eastern Plating Co., Inc.'s Written Hazard Communication Program is intended to satisfy the requirements 29 CFR 1920.1200(h)

6.2 Responsibility

The Plant Chemist is responsible for ensuring that all employees are trained in an adequate and timely manner.

6.3 Instructional Format

6.3.1 Orientation

All new hires will be orientated by the Shop Foreman as to the following:

6.3.1.1 Description of the Processes

6.3.1.2 Explanation Hazard Communication Standard and Right-to-Know

6.3.1.3 Location of Key Areas

- 6.3.1.3.1 Time Clock & Bulletin Board
- 6.3.1.3.2 Shipping & Rec.
- 6.3.1.3.3 Offices
- 6.3.1.3.4 Rest Rooms
- 6.3.1.3.5 Masking-Inspection Area
- 6.3.1.3.6 Racking Area
- 6.3.1.3.7 Process Area
- 6.3.1.3.8 Chemical Storage Area
- 6.3.1.3.9 Mechanical Room
- 6.3.1.3.10 Lab

6.3.1.4 Explanation of Hazards Associated with Normal Entry Level Tasks

All non-clerical, hourly employees are to be instructed as to the hazards associated with the job tasks specific to the Racking/Masking-Inspection Area. These hazards would include:

- 6.3.1.4.1 Penetration
- 6.3.1.4.2 Racks
- 6.3.1.4.3 Parts
- 6.3.1.4.4 Hand Tools
- 6.3.1.4.5 Chemical

6.3.1.4.5.1 Masking Products and Strippers
6.3.1.4.5.2 Entrapped Chemicals which could be released when blind holes are blown out with compressed air during the drying process.
6.3.1.4.5.3 Splashing from Process Chemical when in that area.

6.3.1.4.6 Impact
Flying Chips or Particles which could be released when blind
holes are blown out with compressed air during the drying process.

6.3.1.4.7 Lifting
Moving and Leveraging of Parts and Racks

6.3.1.5 Explanations of Job Classifications in which Hazards Exist
6.3.1.5.1 Racking Masking Inspection
6.3.1.5.2 Process Line Operation
6.3.1.5.3 Chemical Handling on Process Line

6.3.1.6 Proper Attire for Safety in the Workplace
6.3.1.6.1 No Open Shoes or Sandals
6.3.1.6.2 No Loose Fitting Clothes or Jewelry which would be prone to snagging or entanglement
6.3.1.6.3 No Dark Glasses that would impair vision

6.3.1.7 Personal Protective Equipment
6.3.1.7.1 Gloves: Cotton Gloves
6.3.1.7.2 Back Support: Support Belts will be provided to individuals required to lift objects of 75 lbs or more for men or 50 lbs or more for women.
6.3.1.7.3 Safety Glasses
Eye Protection Policy:
All employees are to be issued safety glasses to be worn in chemical process areas, parts dry-off area, the mechanical and chemical storage room and when using MEK in the masking area. Employees can exchange their glasses without charge if the old glasses are turned in.

6.3.1.8 Accidents
6.3.1.8.1 Report All Accidents to Supervisor
6.3.1.8.2 First Aid
6.3.1.8.2.1 Location Of First Aid Kit
6.3.1.8.2.2 Procedure for Self Administering
6.3.1.8.3 First Aid/First Response Coordinators
6.3.1.8.3.1 What Their Function Is
6.3.1.8.3.2 Who Fills Those Positions
6.3.1.8.3.3 How to Contact Them
6.3.1.8.4 Hospitalization
6.3.1.8.4.1 Situations Requiring Hospitalization
6.3.1.8.4.2 Procedure: Report to First Response Coordinators
6.3.1.9 Emergencies
6.3.1.9.1 Instruct on the Location and Contents of the Contingency Plan
6.3.1.9.2 Fires, Chemical Spills or Accidents, Explosions
6.3.1.9.2.1 Evacuate the Building: If an individual is not specifically trained to handle and emergency situation in which that individual is at risk of injury or an hindrance to others reacting to emergency.
6.3.1.9.2.2 Reassembly Area is on the Corner of Baylis and Toone Sts. by the Offices.

6.3.2 Post-Probationary Training
6.3.2.1 Purpose: To provide extensive training to employees who will be working in an environment where hazardous conditions may exist. This training will emphasize the Hazard Communication Standard, the employee's "Right-to-Know", and the Generation, Handling and Storing of Hazardous Waste.
6.3.2.2 Format: Classroom Instruction consisting of approximately four hours of proctored video lessons and text review with quizzes and follow-up discussion. The Plant Chemist shall be responsible for proctoring these training sessions.
6.3.2.3 Course Syllabus:
6.3.2.3.1 Hazard Communication Standard -- "Right to Know" (RTK)

6.3.2.3.1.1 The Right to Know Program and the employer and employee responsibilities
6.3.2.3.1.2 What classifies a substance as hazardous.
6.3.2.3.1.3 Recognition of hazardous materials and how to obtain information on them.
6.3.2.3.1.4 Basic ways to protect oneself from harmful exposure to hazardous materials
6.3.2.3.2 Hazardous Waste - "RCRA"
6.3.2.3.2.1 What is hazardous waste?
6.3.2.3.2.2 Storage and handling of hazardous waste.
6.3.2.4 Training Materials:
6.3.2.4.1 Audio-Visual
6.3.2.4.1.1 "Safety in Metal Finishing", AmericanElectroplating and Surface Finishing Association, Orlando, FL A video which covers the topic of the various hazardous conditions specific to the Metal Finishing Industry.
6.3.2.4.1.2 "Hazardous Materials and Hazardous Waste Management "; On-Site Environmental Services, Inc., Maple Grove, MN
6.3.2.4.1.3 "Personal Protective Equipment", On-Site Environmental Services, Inc., Maple Grove, MN
6.3.2.4.2 Pamphlets, Booklets, Posters & Handouts
6.3.2.4.2.1 "Preparing, Understanding and Using Material Safety Data Sheets"
6.3.2.4.2.2 "Hazardous Material Identification Guide Explanation" Lab Safety Supply, Janesville, WI
6.3.3 Line Operator Training
6.3.3.1 Purpose: To provide extensive training to employees who

will be working in an environment where hazardous will exist on a regular basis. This training will emphasize Personal Protective Equipment and Hazards in the Metal Finishing Industry.

6.3.3.2 Format: Classroom Instruction consisting of approximately four hours of proctored video lessons and text review with quizzes and follow-up discussion. The Plant Chemist shall be responsible for proctoring these training sessions.

6.3.3.3 Course Syllabus:

6.3.3.3.1 Chemical Hazards as they relate specifically to the metal finishing industry.

6.3.3.3.1.1 Acids
Nitric Acid
Sulfuric Acid

6.3.3.3.1.2 Alkalines
Caustic Soda
Alkaline Etch
Waste Treatment

6.3.3.3.1.3 Hexavalent Chrome

6.3.3.3.1.4 Fluorides

6.3.3.3.1.5 Flammables

6.3.3.3.2 Personal Protective Equipment (PPE)

6.3.3.3.2.1 Workplace assessment to determine existing and potential hazards that require personal protective equipment.

6.3.3.3.2.2 Basic Hazard Categories

6.3.3.3.2.3 Types of PPE

6.3.3.3.2.4 Proper Choice, Fitting and Care of PPE

6.3.3.4 Training Materials:

6.3.3.4.1 Audio-Visual

6.3.3.4.1.1 "Safety in Metal Finishing", American Electroplating and Surface Finishing Association, Orlando, FL A video which covers the topic of the various hazardous conditions specific to the Metal Finishing Industry.

6.3.3.4.1.2 "Personal Protective Equipment", On-Site Environmental Services, Inc., Maple Grove, MN

6.3.3.4.2 Pamphlets, Booklets, Posters & Handouts

6.3.4 Safety Meetings and Continuing Education and Training
Safety Meetings will be conducted once per month at which time a short, "Mini", (<15 minute) training session will be conducted. As required, longer sessions will be held for the purpose of plant-wide safety training.

6.3.5 Demonstration of Proficiency All categories of instruction mentioned above, with the exception of Orientation or "Mini" training sessions will be completed by the administration of a quiz. All employees must have a grade of 70% or better. If not, then the quiz will be re-administered with a tutor present to coach successful completion. An employee who has attained a score of 100% on a quiz without tutoring, shall no longer be required to take that quiz after subsequent training sessions. All quizzes and records of attendance of training sessions shall be maintained with similar safety records by the Plant Chemist and in each employee's personnel file.

6.3.6 Retraining/Review All employees shall be retrained on the information contained herein at a minimum of biannually for Hazard Communications, Right-to-Know and Personal Protective Equipment and annually for Hazardous Waste training.

6.3.7 Documentation of Training
The Plant Chemist will be responsible for assuring that all training sessions are recorded and that that record is filed properly. All records shall contain the following information:

6.3.7.1 Names of persons trained
6.3.7.2 Date and length of training session
6.3.7.3 Who conducted the training
6.3.7.4 Type of training
6.3.7.5 Outline or lesson plan

HAZWOPER

HAZARDOUS WASTE
OPERATIONS &
EMERGENCY RESPONSE

AWARENESS LEVEL

COASTAL

CAT. NO. HWOE1H

HAZWOPER

HAZARDOUS WASTE
OPERATIONS &
EMERGENCY RESPONSE

AWARENESS LEVEL

HAZWOPER: AWARENESS LEVEL

This employee handbook is one of a series of fully-illustrated employee handbooks, informative posters and broadcast-quality video training programs produced by Coastal Video Communications Corporation. Each product is the result of painstaking analysis, design, development and production by the instructional designers and technical specialists on our staff.

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INTRODUCTION

Protecting workers from hazardous materials is one of our biggest safety challenges. To help meet this need, the Occupational Safety and Health Administration (OSHA) and the Environmental Protection Agency (EPA) have issued joint standards on Hazardous Waste Operations and Emergency Response—commonly called HAZWOPER.

The regulations are designed to control hazardous materials and protect the environment.

- **RCRA,** the Resource Conservation and Recovery Act of 1976, banned open hazardous waste dumps and helped control hazardous waste from its creation to final disposal.
- **CERCLA,** the Comprehensive Environmental Response Compensation and Liability Act of 1980, established a fund for the removal of hazardous materials released into the environment.
- **SARA,** the Superfund Amendments and Reauthorization Act of 1986, was created to reduce the risk to workers in hazardous waste operations and emergency response.

As a result of these laws, workers who are to take part in hazardous waste operations or emergency response must receive proper training. This handbook will examine the training required for Level 1 emergency responders—First Responders at the Awareness Level.

WHAT ARE HAZARDOUS MATERIALS?

- Hazardous materials are substances that pose a serious threat to human health or the environment if they are improperly managed.
- Certain materials are listed by name as hazardous under RCRA, CERCLA, and laws passed by the EPA, OSHA and the Department of Transportation (DOT).
- The DOT lists nine classes of hazardous materials. Each class has a distinctive symbol for labeling containers and vehicles:

Explosives

Compressed gases.

Flammable and combustible liquids.

Flammable solids.

Oxidizers and organic peroxides.

Poisons.

Radioactive materials.

Corrosives.

The standard covers hazardous waste operations and emergency response that "involve employee exposure or the reasonable possibility for employee exposure to safety or health hazards."

Safety hazards include physical dangers such as fire or explosion.

Health hazards are chemicals and disease organisms that can cause illness, injury or death.

The HAZWOPER Standard covers three main activities:

Clean-up operations at uncontrolled hazardous waste disposal sites

Normal operations at hazardous waste treatment, storage or disposal (TSD) facilities

Emergency response to hazardous materials releases anywhere, including releases during transportation.

These workers are covered by the standard:

State and local government employees

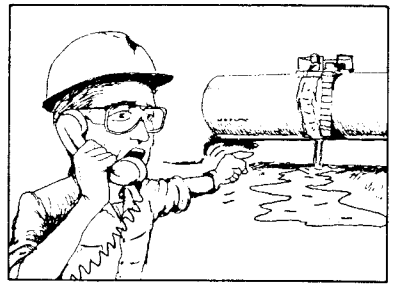
Public first responders, such as fire fighters, police officers, and emergency medical technicians

Any employees who are expected to respond to a hazardous materials emergency, including:

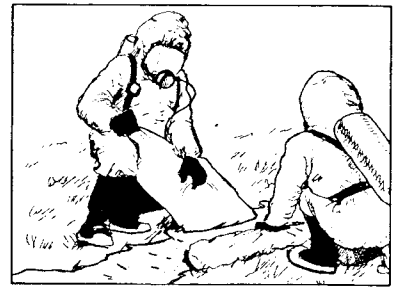
- Industrial fire brigades
- Hazardous materials (HAZMAT) response teams, which are organized groups of workers designated by the employer to control releases of hazardous materials.

The HAZWOPER Standard requires emergency responders to be trained and certified at one of five levels.

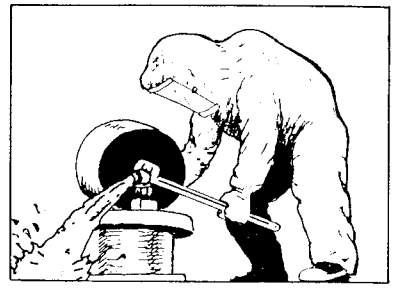
Level 1: **First Responders at the Awareness Level** are workers who are likely to discover a hazardous materials release and have been trained to notify the proper authorities.



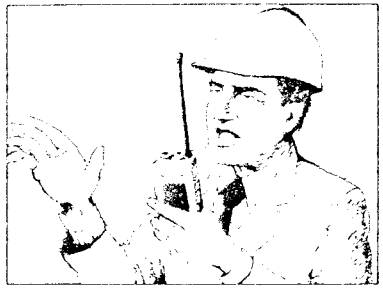
Level 2: **First Responders at the Operations Level** are trained to contain a release from a safe distance and keep it from spreading, without trying to stop it.



Level 3: **Hazardous Materials Technicians** respond aggressively to stop the release of hazardous materials.

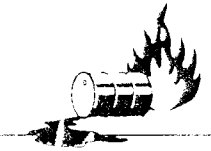


Level 4: **Hazardous Materials Specialists** have detailed knowledge of specific chemicals and provide on-site cooperation with government officials.



Level 5: **On-Scene Incident Commanders** take control of the incident scene during emergency response.

At least once a year, all emergency responders must either receive refresher training or show that they are able to perform their duties.



Training for Level I responders must cover the following subjects:

What hazardous materials are, the risk they pose and the possible outcomes of a release

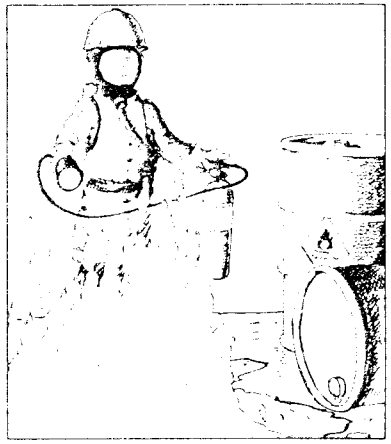
Recognizing the presence of hazardous materials, identifying released hazardous materials, if possible

The role of the Level I responder in the employer's Emergency Response Plan, including site security, and using the *Emergency Response Guidebook* published by DOT

Recognizing the need for additional resources and notifying the appropriate authorities

Basically, there are four ways in which a material can be hazardous. Some materials have more than one of these qualities.

Ignitable or **flammable** materials:
- Can catch fire and burn easily
- Include liquids with low flash points, flammable solids, ignitable compressed gases and oxidizers.

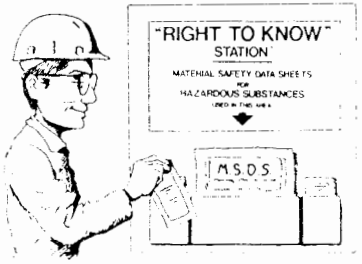


Corrosive materials:
- Can eat through containers and combine with other chemicals
- Can burn skin and eyes on contact, sometimes without the victim being aware of the injury. Some corrosives burn without pain.

Reactive materials:
- Can explode, cause fire or produce toxic vapors when they come in contact with air, water or other chemicals
- Include materials listed by DOT as Class A or B explosives.

Toxic materials:
- Can enter the body by being inhaled, ingested through the mouth, or absorbed or injected through the skin
- Include poisons that can cause acute or chronic health effects.
  - **Acute** health effects are immediate and short-term.
  - **Chronic** effects develop over time and are long-term.

For valuable information on the dangers of any hazardous material you use, check the MSDS **before** an emergency occurs.



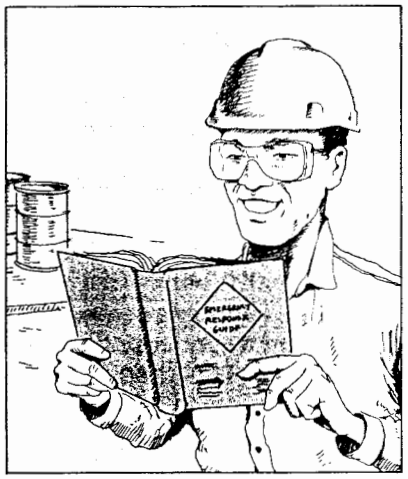
RECOGNIZING AND IDENTIFYING HAZARDOUS MATERIALS

If you discover any release of hazardous material, your first concern should be for your own safety
- **Do not risk** your safety by rushing in to stop a release.
- If the spill is an unknown substance in an area where hazardous materials are used, assume that it's hazardous.
- Keep a safe distance while identifying the release. One way of doing this is to use binoculars to read labels on containers or vehicles.

These clues can help you identify the released material:
- Dead animals or discolored plants
- Where the release is and what the spilled chemical was being used for
- Whether the material is a solid, a liquid or a gas
- Information from workers involved in the release, including vehicle drivers
- The numbers, symbols and color on container labels and vehicle placards.

DOT has developed a color code for labels and placards.
- Oxidizers and organic peroxides—YELLOW
- Flammables—RED
- Explosives—ORANGE
- Corrosives—BLACK and WHITE
- Poisons and irritants—WHITE
- Non-flammable gases—GREEN

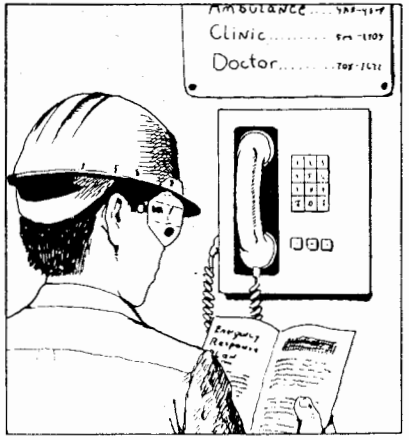
THE DOT EMERGENCY RESPONSE GUIDEBOOK



This book can help you judge the hazards of a released chemical. It gives the following information:

- The material's physical and chemical properties
- Its physical hazards and health hazards
- Personal protective equipment needed
- Environmental damage
- Fire fighting techniques
- How to deal with spills and leaks
- First-aid measures
- Safe evacuation distances.

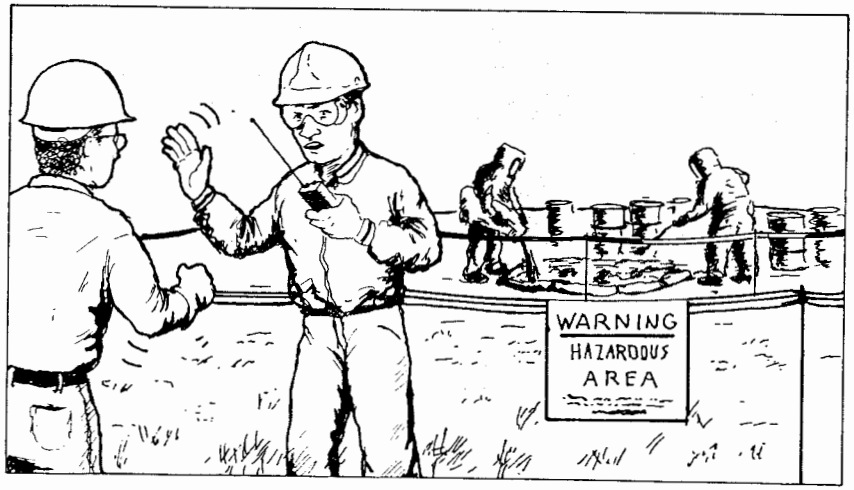
THE EMPLOYER'S EMERGENCY RESPONSE PLAN



- The Emergency Response Plan gives the company's policies and procedures for dealing with emergencies.
- All workers should be familiar with their company's plan.
- Emergency Response Plans must be pre-approved by local authorities when outside help, such as the fire department, would be called to the scene.
- The plan lists all needed emergency phone numbers. It's also a good idea to post these numbers near phones.

SITE CONTROL

- Level 1 responders may be responsible for site security and control according to their employer's Emergency Response Plan.
- Some companies direct Level 1 employees to notify the communications center and leave the scene.
- Other companies give Level 1 responders site control duties, which can include:
  - Staying in the safe zone to secure the area and keep on-lookers out.
  - Waiting for the emergency response team and giving them needed information.
- Take any steps for site control that are assigned you in your company's plan.



NOTIFYING THE PROPER AUTHORITIES

- If you find a release, report it at once to whomever the Emergency Response Plan tells you to notify.
- Give as much useful information as you can, including:
  - Your name and department
  - The amount of the release and where it is
  - What material has been released—either its chemical or trade name, or a description of it
  - Any known hazards to people or the environment
  - Conditions at the scene, including any special problems such as fire, injuries or property damage
  - Details about the spread of the release, such as whether vapors are escaping into the air or the spill has reached a drain or waterway.
- By law, any release of hazardous material greater than the threshold limit into the environment must be reported to local authorities at once.

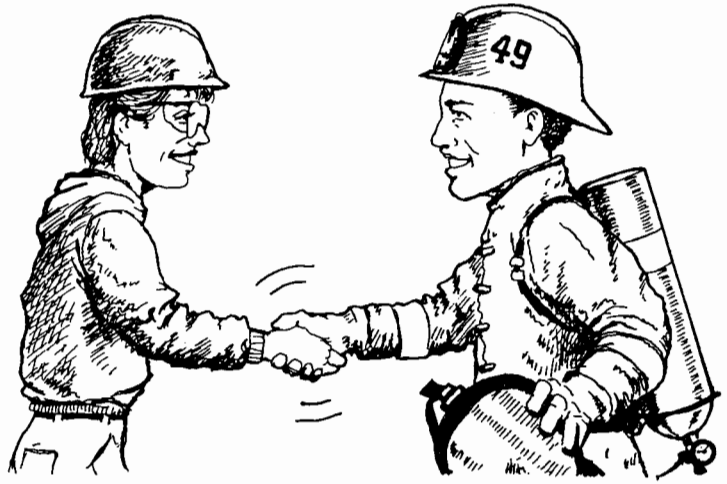
SUMMARY

This program, along with information and other training from your employer, should help you to carry out the duties of a Level 1 emergency responder, which include:

- Knowing what hazardous materials are
- Recognizing the presence of hazardous materials and being aware of their risks during a release
- Identifying the released material if you can
- Using the DOT *Emergency Response Guidebook*
- Understanding and following your role in the Emergency Response Plan
- Performing any site control duties the plan assigns to you
- Realizing the need for additional emergency response
- Notifying the proper authorities.

Your role as a First Responder at the Awareness Level, as with response at any of the other responder levels, **does not involve risking your life.**

Taking these steps quickly and correctly can help you save lives and prevent damage to property and the environment.



REVIEW

There are nine classes of hazardous materials:
- Compressed gases
- Corrosives
- Explosives
- Flammable and combustible liquids
- Flammable solids
- Organic peroxides
- Oxidizers
- Poisons
- Radioactive materials.

The HAZWOPER Standard states five levels of certification for emergency responders:
- Level 1: **First Responders at the Awareness Level** are trained to notify authorities in case of a release.
- Level 2: **First Responders at the Responder Level** are certified to contain releases to prevent the spill from spreading.
- Level 3: **Hazardous Materials Technicians** respond to stop the release of hazardous materials.
- Level 4: **Hazardous Materials Specialists** possess detailed knowledge of hazardous chemicals.
- Level 5: **On-Scene Incident Commanders** take control of the incident scene during emergency response.

When reporting an accident, give as much useful information as possible, including:
- Your name and department
- The amount and location of the release
- The material released—chemical name, trade name or accurate description
- Conditions at the scene—fire, injuries or property damage
- How the release is spreading—vapor release or drainage.

DETACH HERE

QUIZ

1. True False The HAZWOPER Standard was developed to protect workers from hazardous materials.
2. True False Hazardous materials are substances that can pose a serious threat to human health or the environment if they are mismanaged.
3. True False All hazardous materials are poisonous.
4. True False The HAZWOPER Standard covers operations that involve a reasonable possibility of workers being exposed to safety or health hazards.
5. True False Physical dangers like fire and explosion are called health hazards.
6. True False The only emergencies covered by the HAZWOPER Standard are those that occur at hazardous waste disposal sites.
7. True False Only emergency responders who are government employees need to be trained.
8. True False A HAZMAT team is an organized group of workers designated by the employer to control hazardous materials releases.
9. True False The HAZWOPER Standard describes three levels of training for emergency responders.
10. True False Level 1 responders are trained to recognize hazardous materials releases and notify the proper authorities.
11. True False Materials are flammable if they can eat through containers and burn skin on contact.
12. True False Some toxins enter the body by being inhaled.
13. True False If you find an unknown material leaking from a container, you should try to plug the leak at once.

14. True False The numbers, symbols and colors on labels and placards can help you identify a spilled material.

15. True False The DOT *Emergency Response Guidebook* gives information on the hazards of different materials and how you can protect yourself from them.

16. True False All companies that use hazardous materials have the same Emergency Response Plan.

17. True False Level 1 responders are always required to provide site control at a release.

18. True False If you find a hazardous materials release, you must report it at once to whomever is named in your company's Emergency Response Plan.

19. True False In reporting an emergency, you should describe any known hazards to people or the environment.

20. True False Level 1 responders must often risk their lives to stop a hazardous materials release.

ACKNOWLEDGEMENT OF TRAINING

I have read and understand the training handbook, **HAZWOPER: Awareness Level.** I have also completed and passed the comprehensive quiz at the conclusion of the handbook.

_____ _____

Employee's Signature Date

_____ _____

Trainer's Name Date

NOTE: This record may be included in the employee's personnel or training file.

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VIDEO-BASED PROGRAMS AVAILABLE FROM COASTAL

- Americans with Disabilities Series
- Anhydrous Ammonia
- Asbestos
- Back Safety
- Bloodborne Pathogens Series
- California S.B. 198
- Chemical Handling Series
- Chlorine Safety Series
- Commercial Driver Series
- Confined Space Series
- Contractor Safety
- Drum Handling
- Electrical Safety Series
- Emergency Planning Series
- Ergonomics
- Eye Protection
- Fall Protection Series
- Fire Safety Series
- Fly Ash
- Forklift Safety Series
- Hand Safety
- Hazard Communication
- Hazardous Waste Transportation Series
- HAZWOPER Training Series
- Hearing Protection
- Heat Stress
- Indoor Cranes
- Lab Safety
- Laser Safety
- Lead Safety
- Line Breaking
- Lockout/Tagout Series
- Low-Lift Trucks
- Motor Vehicle Awareness
- Off-the-Job Safety Series
- Office Safety
- Personal Protective Equipment
- Pollution Prevention Series
- Process Safety Series
- Respiratory Protection Series
- Safety Orientation
- Slips, Trips & Falls
- Smoke-Free Workplace
- Static Electricity
- Stress Management
- Substance Abuse
- Trenching & Shoring
- Video Display Terminals
- Water Rescue
- Welding Safety Series

ILLUSTRATED EMPLOYEE HANDBOOKS AVAILABLE FROM COASTAL

- Back Safety
- Bloodborne Pathogens
- Chlorine Safety
- Confined Space Series
- Electrical Safety Series
- Ergonomics
- Eye Protection
- Fall Protection Series
- Fire Safety
- Forklift Safety Series
- Hand Safety
- Hazard Communication
- HAZWOPER Training Series
- Hearing Protection
- Heat Stress
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- Video Display Terminals

Hazard Communication

A Healthy Responsibility

COASTAL

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CONTENTS

INTRODUCTION

Chemicals are used to manufacture many materials and objects that are important in our lifestyle. But as helpful as chemicals are, some of the ones used in industry can be dangerous.

Telling you what these hazards are helps your employer protect you. Knowing the hazards helps you recognize the dangers of certain chemicals and the importance of handling them safely.

The Occupational Safety and Health Administration (OSHA) has developed a Hazard Communication Standard to make sure this needed information reaches you and your employers.

ELEMENTS OF THE STANDARD

The Hazard Communication Standard focuses on five main areas:

- Identifying hazardous materials
- Product warning labels
- Material Safety Data Sheets, or MSDSs
- A written Hazard Communication Program
- Employee training.

CHEMICAL HAZARDS

There are two types of chemical hazards:

- **Physical hazards:** Can produce a dangerous situation outside your body.

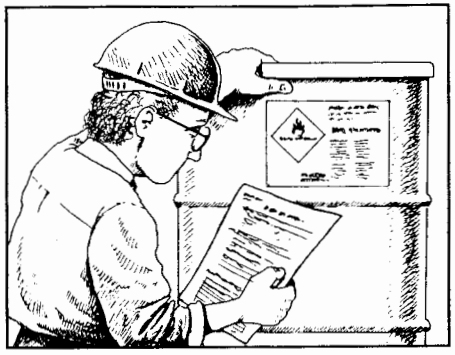
- **Health hazards:** Can damage your health.

  - Acute health hazards do their damage rapidly from short-term exposure.
  - Chronic health hazards affect the body slowly through long-term exposure.

REQUIREMENTS OF THE STANDARD

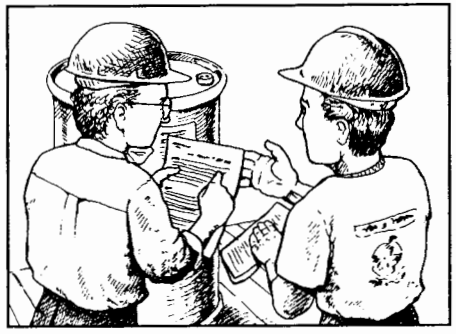
The Hazard Communication Standard requires chemical manufacturers and importers to:

- Identify all physical and health hazards of any material they produce or bring into the country.
- Report these hazards by:
  - Attaching a warning label to each container of the chemical
  - Sending an accurate MSDS to any company to whom the material is shipped.



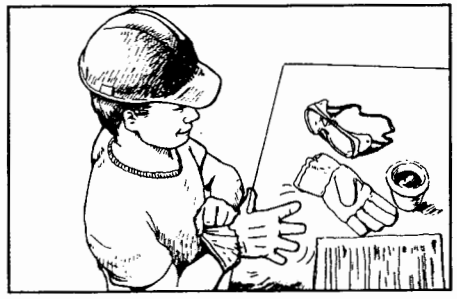
Each employer that uses hazardous chemicals acts on this information by:

- Identifying all hazardous materials in the workplace
- Obtaining an up-to-date MSDS for each one
- Adopting necessary engineering controls, protective equipment and safe work practices
- Making sure all workers receive the information and training they need to do their job safely.



It's up to you, the individual worker, to use this information.

- Read and follow the instructions on product warning labels and the MSDS.
- Use any necessary protective equipment.
- Follow the safe work practices given in your employee training.



PRODUCT WARNING LABELS

Warning labels are designed to alert you that a material is dangerous. They must identify all the hazards of a material, but they might not tell you everything you need to know about controlling those dangers or protecting yourself.

With a few exceptions, labels are required on:

All containers of hazardous material in the workplace

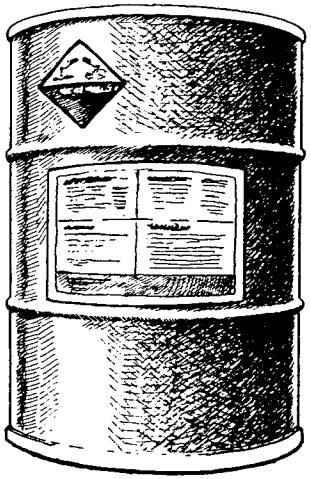
All containers of hazardous material being shipped from one workplace to another.

Warning labels must give the following information:

The name of the material

All its physical hazards and health hazards.

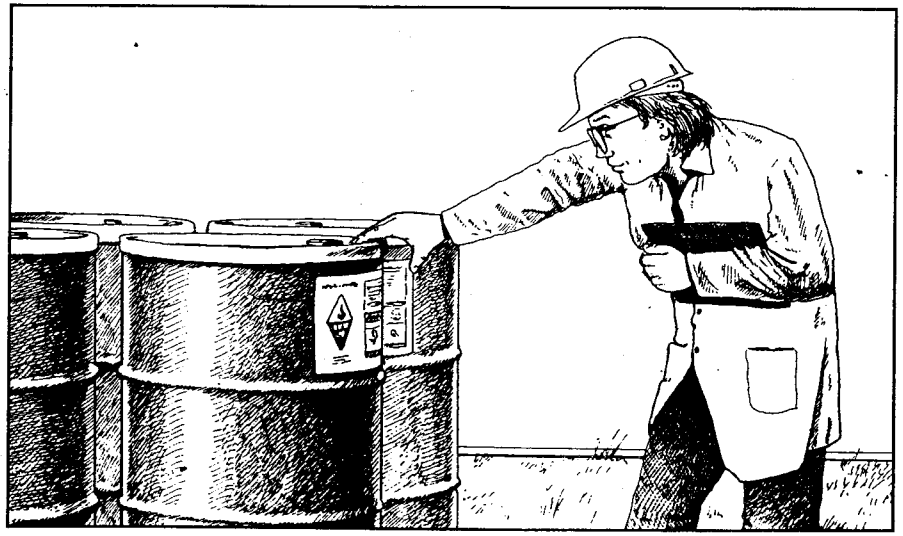
Labels on containers being shipped from one location to another must also give the name, address and phone number of a responsible source of information about the material.



This information can be given in words, symbols or pictures. It must be easy to see and easy to read.

Be sure to do your part in using this information effectively:

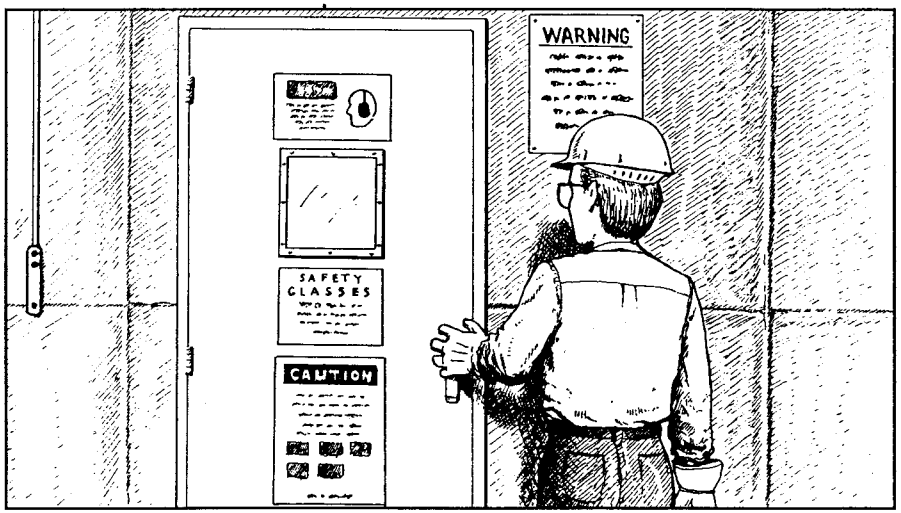
- Read the label on the container of every chemical you use.
- Check the MSDS whenever you need more information about how to control the material's hazards.
- Follow the instructions the label gives you.



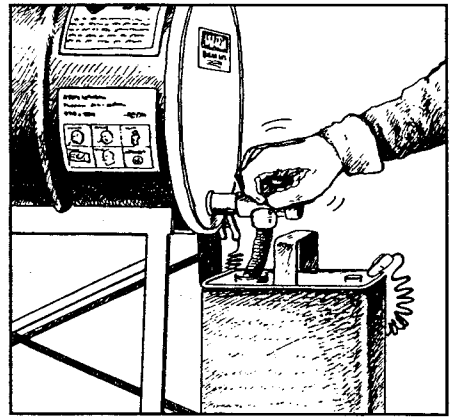
EXCEPTIONS

In certain situations containers need not be labeled, even if they contain hazardous materials:

- If several stationary containers in a single area hold similar materials, the warning can be given on area signs, rather than labels on each container.
- For stationary process containers, standard operating procedures or other written warnings can be used instead of container labels.



- Pipes need not be labeled.
- Portable containers do not have to labeled if the chemical was transferred from a labeled container and is immediately used by the worker who transferred it.
- Be careful around all chemical containers whether or not they are labeled.



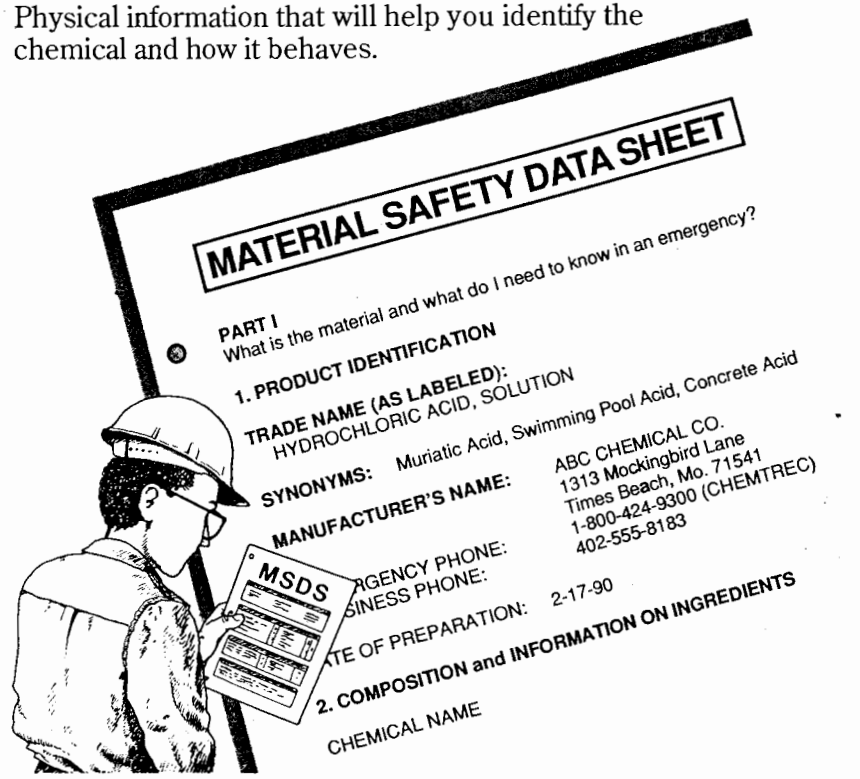
THE MSDS

The MSDS gives employers and workers detailed information about the hazards of specific materials and how to control them.

MSDSs are available to workers in the area where each hazardous material is used.

Each MSDS should tell you the following:

- The common name and the chemical name of the material, unless this information is a trade secret
- The name, address and phone number of the manufacturer
- Emergency numbers you can use to get immediate information on specific hazards
- The date the form was written or last revised
- Any hazardous ingredients in the chemical
- Information about the chemical's hazards, if the material is a trade secret.
- Physical information that will help you identify the chemical and how it behaves.



Fire and explosion information:

The material's flash point, autoignition temperature, and upper and lower flammability limits

Materials to use to put out fires involving this chemical

Special fire-fighting techniques and equipment

Any unusual fire or explosion hazards.

Dangers from chemical reactions with this material:

Whether the chemical itself is stable or unstable

Conditions and other materials which can cause reactions with this chemical

Any dangerous substances that can be produced when it reacts.

Measures to control the chemical's hazards:

Engineering controls

Personal protective equipment

Safe storage of the chemical

Safe handling practices.

Information about the chemical's health hazards:

Safe exposure limits, such as the Permissible Exposure Limit (PEL) and the Threshold Limit Value (TLV)

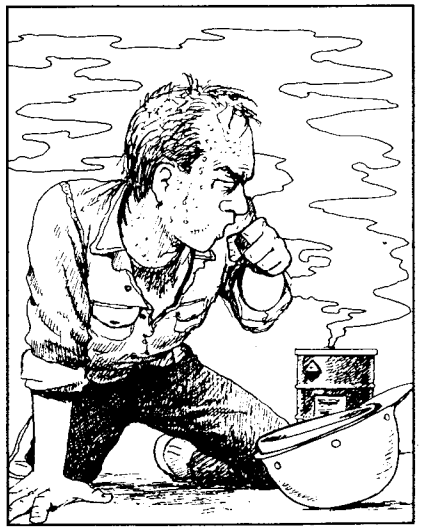
Acute and chronic symptoms of exposure

The chemical's main routes of entry into the body

Medical conditions that can be made worse by exposure

Whether the chemical can cause cancer

Emergency and first-aid treatments.



How to deal with spills and leaks:

Clean-up techniques

Personal protective equipment to be used during clean-up

How to dispose of waste materials.

The information on the MSDS can help you make your workplace safe.

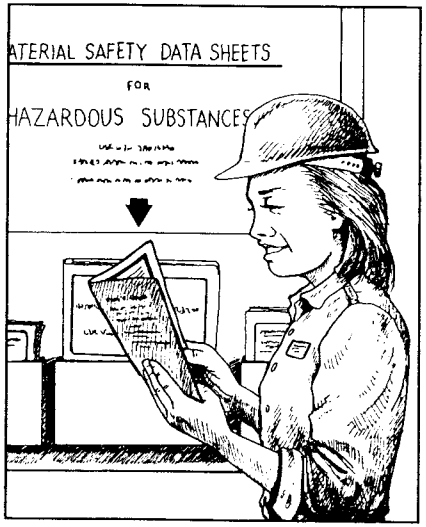
Know where the MSDS for every hazardous chemical in your work area is kept.

Be familiar with the most important points for each hazardous material you use.

Check the MSDS whenever you need more information.

Be ready to find emergency response information on your company's MSDS form quickly.

Follow the safety practices the MSDS gives you.

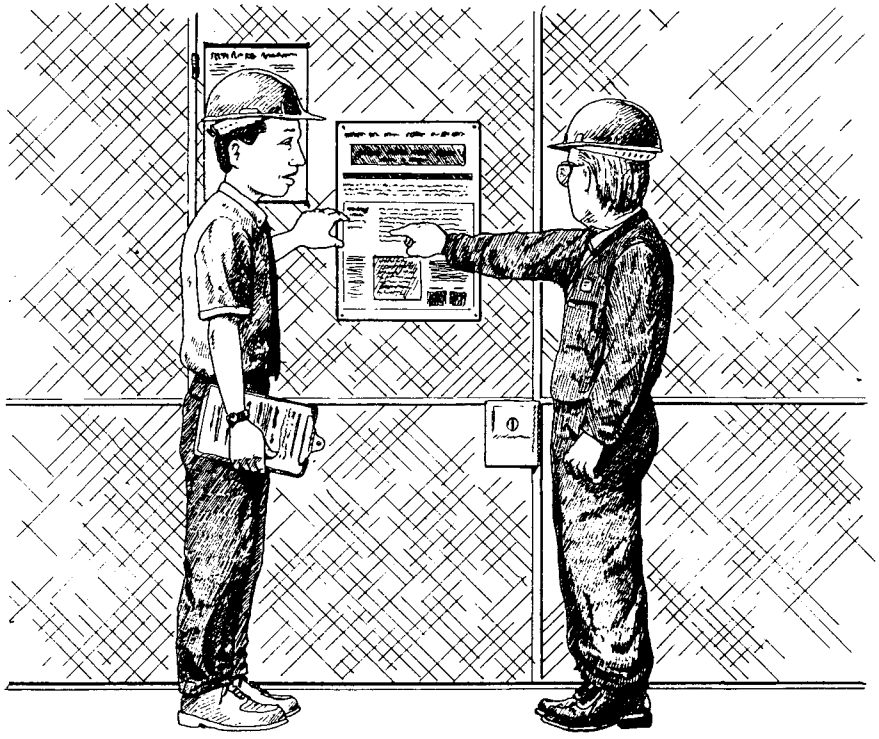


THE WRITTEN HAZARD COMMUNICATION PROGRAM

The written Hazard Communication Program describes the chemical hazards in your workplace and how you will be told about these dangers. It includes:

- A list of all the hazardous materials in your workplace
- How the needed labels, MSDSs and employee training will be provided
- How employees will be informed of hazards from unlabeled pipes
- How workers will be told the hazards of nonroutine tasks.

You can request any of this information through your company's written Hazard Communication Program.

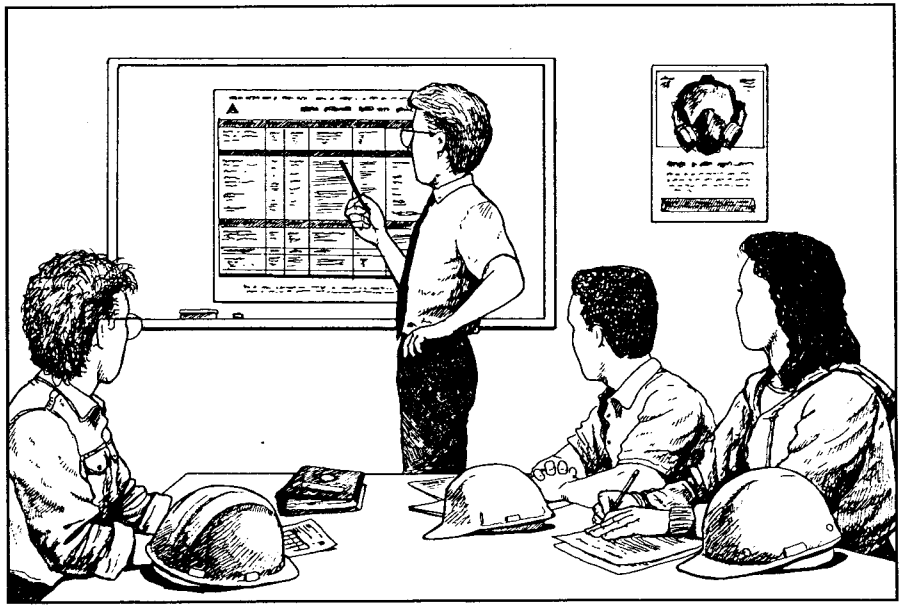


EMPLOYEE TRAINING

Employee training is given to make sure everyone who uses hazardous chemicals is taught how to work with them safely. Effective training focuses on the specific hazards each worker faces in his own individual job.

Your training should cover four main subjects:

- How to detect the release of hazardous chemicals
- The hazards of all chemicals in your work area and the dangers of any job you may have to do
- How to protect yourself from these dangers
- The details of the Hazard Communication Program developed by your employer.



By following the safe work practices explained in your training, and using the information from product warning labels and MSDSs, you can help keep hazardous chemicals under control in your workplace.

SUMMARY

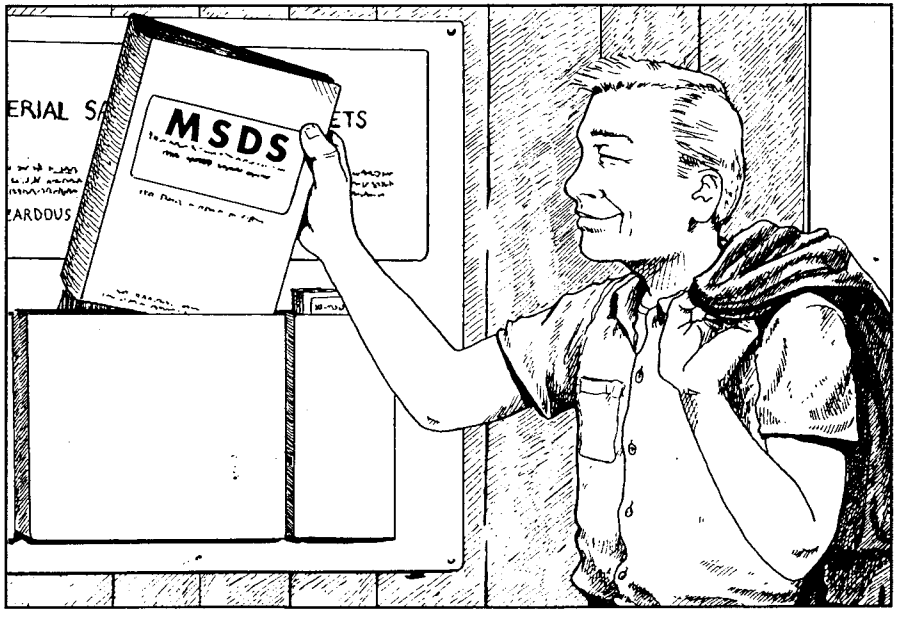
Your written Hazard Communication Program should include:
- A list of all hazardous chemicals
- Material Safety Data Sheets (MSDS)
- Availability of training sessions.

All materials will have warning labels listing the material name, hazardous ingredients, warnings and the manufacturer's name.

Never assume an unlabeled container is harmless.

The Material Safety Data Sheet (MSDS) will include:
- The name of the material
- Hazardous ingredients and the Permissible Exposure Limit (PEL)
- Physical description of chemical ingredients
- Fire and explosion information
- Health hazards and symptoms
- How to deal with spills and leaks.

Attend training sessions. Your "Right to Know" only works if you use it.



- Accident Investigation
- Anhydrous Ammonia
- Asbestos
- Back Safety
- Bloodborne Pathogens Series
- Chemical Handling Series
- Chlorine Safety Series
- Cold-Weather Safety
- Commercial Driver Series
- Confined Space Series
- Contractor Safety
- Electrical Safety Series
- Emergency Planning Series
- Ergonomics Series
- Eye Protection
- Fall Protection Series
- Fire Safety Series
- First Aid on the Job
- Foot Protection
- Forklift Safety Series
- Hand Safety
- Hard Hat Safety Series
- Hazard Communication
- HAZWASTE Transportation Series
- HAZMAT Transportation Series
- HAZWOPER Training Series
- Hearing Protection
- Heat Stress
- Hydrogen Sulfide
- Indoor Cranes
- Lab Safety Series
- Laser Safety
- Lead Safety
- Line Breaking
- Lockout/Tagout Series
- Low-Lift Trucks
- Machine Guarding
- Most-Cited OSHA Violations
- Motor Vehicle Awareness
- Off-the-Job Safety Series
- Office Safety
- Personal Protective Equipment
- Pollution Prevention Series
- Pro-Active Safety Management
- Process Safety Series
- Respiratory Protection Series
- Safety Orientation
- Slips, Trips & Falls
- Smoke-Free Workplace
- Stairways & Ladders
- Static Electricity
- Substance Abuse
- Trenching & Shoring Series
- Video Display Terminals
- Winter Driving
- Welding Safety Series

HELPS-ILLUSTRATED EMPLOYEE HANDBOOKS AVAILABLE FROM COASTAL

- Back Safety
- Bloodborne Pathogens
- Chlorine Safety
- Confined Space Series
- Contractor Safety
- Electrical Safety Series
- Ergonomics
- Eye Protection
- Fall Protection Series
- Fire Safety
- Forklift Safety Series
- Hand Safety
- Hazard Communication
- HAZWOPER Training Series
- Hearing Protection
- Heat Stress
- Indoor Cranes
- Lab Safety
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- Pollution Prevention Series
- Process Safety
- Respiratory Protection
- Slips, Trips & Falls
- Static Electricity
- Trenching & Shoring
- Video Display Terminals

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Hazard Communication

Your Safety Net

Hazard Communication

Your Safety Net

This employee handbook is one of a series of fully-illustrated employee handbooks, informative posters, broadcast-quality video training programs, interactive CD-ROM and Web-based courses produced by Coastal Training Technologies Corporation. Each product is the result of painstaking analysis, design, development and production by the instructional designers and technical specialists on our staff.

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CONTENTS

INTRODUCTION

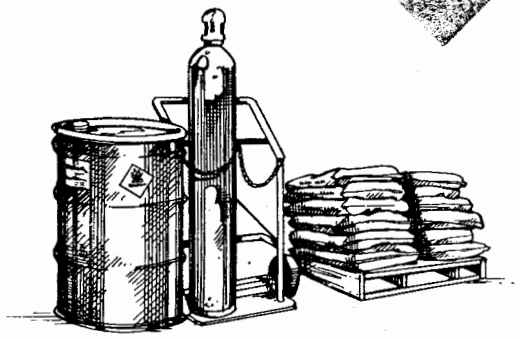
If you've worked around chemicals and hazardous materials for any length of time, you may know that HazCom is short for OSHA's Hazard Communication Standard. It's your safety net, providing information about the protection you need to work safely with and around chemicals and hazardous materials.

Your employer provides HazCom information and training for your safety. Your part is an ongoing commitment to staying up-to-date on chemical safety at work. Every day, what you need to know changes. New substances, new procedures and new people are added. Maybe you or a co-worker took an action that could have had serious consequences.

That's why hazard communication training is an ongoing process and takes continual commitment. It's the only way you can keep your safety net in place.

CHEMICAL OVERVIEW

Chemicals can be:
- Solids
- Liquids
- Gases.



Chemicals can be found in:
- Bags
- Drums
- Tanks
- Pressure vessels
- Process systems.

Each chemical has specific properties — ways of acting that make it predictable. To find out a chemical's properties, you check the material safety data sheet, or MSDS. The MSDS provides all kinds of information about the chemical: how it looks, smells, acts and what it can do — to its surroundings, to the environment and to you.

Information about a chemical also is found on the label. The label is a kind of brief MSDS and provides a way to quickly check chemical information during your daily activities.

THE HAZARD COMMUNICATION STANDARD

Because chemicals can be dangerous, OSHA requires everyone who works around chemicals to be trained to recognize and deal with chemical hazards.

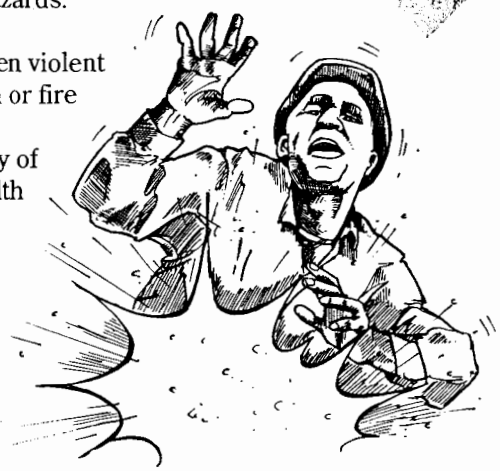
Your training includes information about:
- OSHA's Hazard Communication Standard
- The list of hazardous chemicals present in your workplace and their hazards
- Your facility's written plan to deal with chemical hazards
- How to use MSDSs and labels
- How you can protect yourself.

You can check an MSDS at any reasonable time. You also can examine the list of hazardous chemicals and the written program for your workplace. If you're not sure where these are located, just ask your supervisor. It's all part of helping you learn everything you can about the chemicals at work — a way to help you take responsibility for practicing chemical safety.

CHEMICAL HAZARDS

Chemicals have two kinds of hazards:

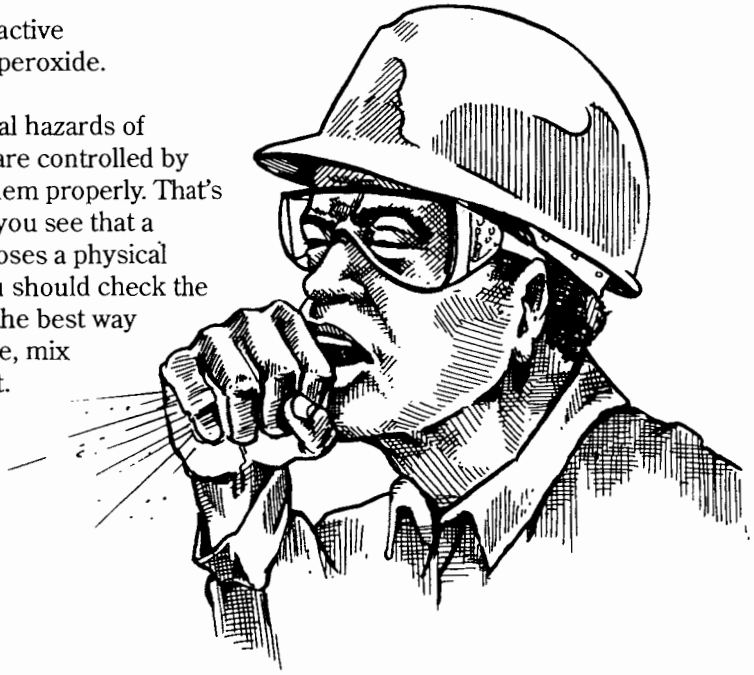
- **Physical hazards** — a sudden violent reaction such as an explosion or fire
- **Health hazards** — the ability of a chemical to affect your health either quickly or over a long period of time.



Chemicals that pose a physical hazard are:
- Flammable
- Explosive
- Reactive.

Physical hazards are described by words like:
- Flammable, combustible or explosive
- Oxidizer
- Water-reactive
- Organic peroxide.

The physical hazards of chemicals are controlled by handling them properly. That's why when you see that a chemical poses a physical hazard, you should check the MSDS for the best way to use, store, mix and move it.



HEALTH HAZARDS

A chemical is considered a health hazard if it causes adverse health effects when people are overexposed. Health effects include illnesses, diseases and some kinds of physical harm.

There are two types of health effects:

- **Acute** — Acute health effects occur quickly and harm your body after a single exposure. Acute effects include burning, irritation and immediate damage to your internal organs. Acute health effects can be injuries that heal in time, or can be fatal if the substance is very harmful.

- **Chronic** — Chronic health effects develop over time. Usually they occur after repeated low exposures over a long period of time, but they may show up a long time after a single large exposure to some substances. Examples of chronic health effects are liver disease, cancer and lead poisoning.

TYPES OF HEALTH HAZARDS

Under the hazard communication standard, chemicals in the following groups are health hazards:

- **Carcinogen** — a substance that may cause cancer.
- **Corrosive** — a substance, such as an acid, that destroys or changes your tissues on contact.
- **Highly Toxic** — a substance that can kill you quickly even if your exposure is small and does not last very long.
- **Toxic** — similar to a highly toxic substance, but it takes a larger exposure to kill you.
- **Irritant** — a substance that harms your skin at the site of contact but usually causes no permanent damage.
- **Sensitizer** — a substance that causes an allergic reaction that can get worse with each exposure.
- **Target Organ Effects** — a substance that damages a specific body organ or system such as your liver, kidneys, reproductive system or central nervous system.

The important thing to remember about health effects is that they won't occur if you prevent or control your exposure.

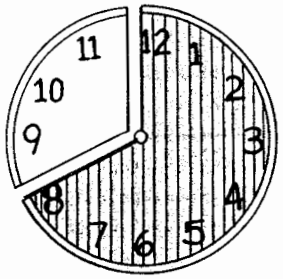
EXPOSURE LIMITS

Exposure limits are set by government and scientific groups and measure how much of a substance you can work around without being overexposed.

Common exposure limits that you will see listed on the MSDS for a substance include:

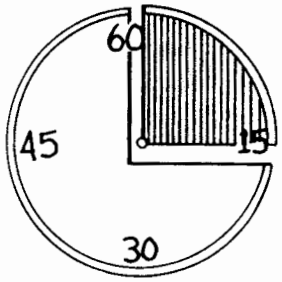
- **PEL** — the permissible exposure limit that you may not exceed when averaged over an 8-hour work day.
- **TLV** — the threshold limit value, another name for the amount that you may not exceed when averaged over an 8-hour work day.
- **STEL** — the short-term exposure limit, which is the concentration that you can safely be exposed to over a 15-minute period.
- **IDLH** — immediately dangerous to life or health, which indicates that a substance is so dangerous that it can kill you very quickly, cause irreversible adverse health effects or prevent you from escaping.

PEL / TLV



8 hours

STEL



15 minutes

IDLH

CONTROLLING EXPOSURE

Facilities first try to keep exposure below PELs and TLVs through engineering controls. When engineering controls aren't sufficient, work practice controls can be added. Examples are using a closed system or special ventilation.

But for some chemicals and some kinds of jobs, you also need to wear personal protective equipment (PPE) to limit your exposure. The kind of equipment you need depends on how the chemical gets into your body. This is called the route of entry (or route of exposure) and is listed on the MSDS. The four major routes of entry are:

- Skin absorption
- Inhalation
- Ingestion
- Injection.

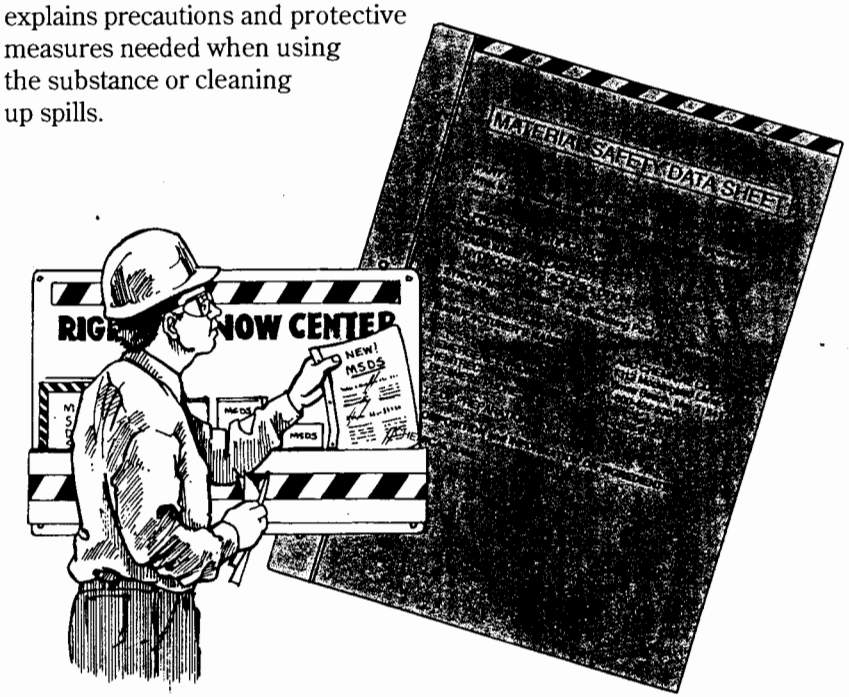
For example, if a substance enters through your skin, you will need to wear PPE that prevents skin contact. If the route of entry is inhalation, you will need to wear a respirator to keep you from breathing the material.

MATERIAL SAFETY DATA SHEETS

Your employer keeps an MSDS for every chemical used in your facility. You may check the MSDS at any reasonable time and should check it often to make sure you stay up-to-date on the latest recommendations.

Each MSDS provides information on:

- **Physical characteristics** — the material's smell, color, appearance, flash point and vapor pressure.
- **Physical hazards** — the material's tendency toward sudden violent reaction, explosion or fire.
- **Health hazards** — whether and how a chemical could harm your health, including signs and symptoms of exposure.
- **Route of entry** — how the chemical gets into your body.
- **Safe handling and use** — explains precautions and protective measures needed when using the substance or cleaning up spills.

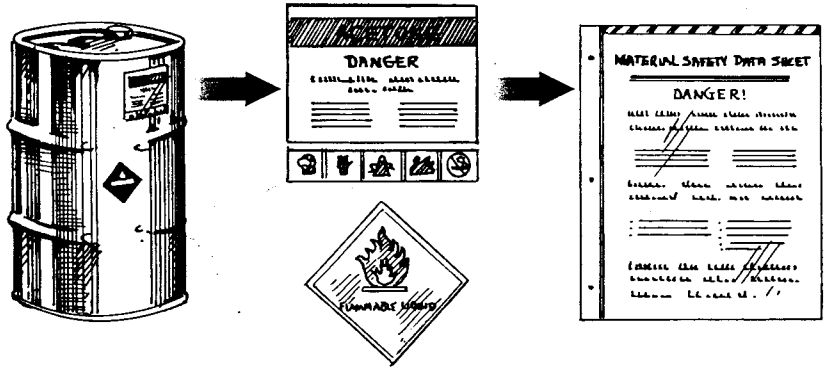


- **Control measures** — lists suggested engineering controls, work practices and personal protective equipment you must wear when working around the chemical.
- **Exposure limits** — the amount of exposure that is considered to be safe.
- **Emergency and first-aid procedures** — the proper methods for dealing with a fire, spill or leak, and information on what to do if you are exposed.

LABELS

Chemical labels are like a short version of the MSDS and remind you of the hazards of the chemical by using words, pictures or symbols.

The label on a chemical container reminds you to check the MSDS for complete information about the substance. The name used on the label also is used on the MSDS.



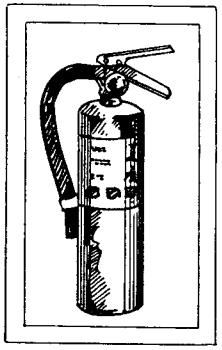
With few exceptions, every chemical must be labeled. Never use a chemical that is not labeled.

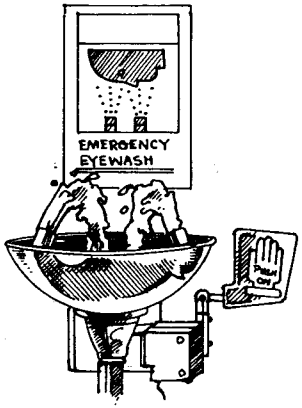
Some common labeling systems include:

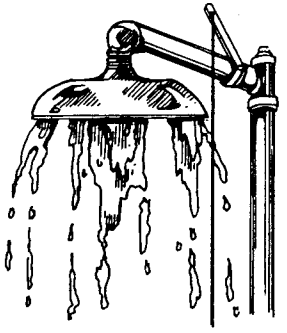
- NFPA diamond labels
- DOT diamond-on-end labels
- Color bar labels.

CHEMICAL SAFETY ON THE JOB

- Know hazards of every chemical in your work area.
- Know what to do in day-to-day operations and in emergencies.
- Assume that every new or unfamiliar chemical is hazardous.
- Always wear required personal protective equipment.
- Inspect and clean your protective gear before and after each use, and check the fit and condition of respirators and cartridges every time.
- Know the emergency procedures for every chemical you use.
- Know the location of emergency showers, eyewash stations, fire extinguishers and exits in every area where you work.
- If you notice signs of chemical exposure, summon help, leave the area and tell your supervisor.
- Wash your hands and face frequently during the day and be careful not to carry chemicals home on your clothing, hands or hair.







SUMMARY

Hazard communication gives you resources to double-check every operation before you act. It lets you know in advance the right thing to do in every situation. And it tells you what to do if something goes wrong.

To make hazard communication work, make sure you:

- Read and understand MSDSs for every chemical in your work area.
- Read the label before using any chemical.
- Wear all protective equipment and keep it in good condition.
- Take part in all chemical safety training opportunities.

Hazard communication is a lot of information and a lot of work for everyone — but it's your safety net for protecting yourself from chemical hazards.

DETACH HERE

CD-ROM AND WEB COURSES FROM COASTAL

- Asbestos Awareness
- Back Safety
- Bloodborne Pathogens
- Confined Space Entry
- Defensive Driving
- Electrical Power Generation
- Electrical Safety
- Employment Terminations
- Environmental Awareness
- Ergonomics
- Fall Protection
- Fire Safety
- First Aid
- Forklift Safety
- Hazard Communication
- Hearing Protection
- HAZMAT Preparation
- HAZMAT Transportation
- HAZWOPER Awareness
- Hydraulics
- Indoor Cranes
- Industrial Electricity
- Interviewing
- Lab Safety
- Lockout/Tagout
- Office Ergonomics
- Office Safety
- Performance Appraisals
- Personal Protective Equipment
- Pneumatics
- Respiratory Protection
- Safety Orientation
- Sexual Harassment
- Stairways and Ladders
- Teamwork
- Time Management
- Trenching and Shoring
- Walking and Working Surfaces
- Vibration Analysis

VIDEO-BASED PROGRAMS FROM COASTAL

- Accident Investigation
- Anhydrous Ammonia
- Asbestos Series
- Back Safety Series
- Behavior-Based Safety Series
- Bloodborne Pathogens Series
- Chemical Handling Series
- Chlorine Safety Series
- Commercial Driver Series
- Confined Space Series
- Contractor Safety
- Construction Safety Series
- Crane Safety Series
- Disaster Planning Series
- DOT Drug & Alcohol Testing
- Driving Safety Series
- Electrical Safety Series
- Electrical Power Generation Series
- Emergency Planning Series
- Employment Terminations
- Environmental Series
- Ergonomics Series
- Fall Protection Series
- Fire Safety Series
- First Aid
- First Aid for Schools
- Foot Protection
- Forklift Safety Series
- Groundskeeping Safety
- Hand Safety
- Hand Tool Safety Series
- Handwashing
- Hard Hat Safety
- Hazard Communication for Schools
- Hazard Communication Series
- HazWaste Transportation Series
- HAZMAT Transportation Series
- HAZWOPER Training Series
- Hearing Protection
- Heat Stress
- Highway Work Zone Series
- Hotel Safety Orientation
- Hydrogen Sulfide
- Indoor Cranes
- Interviewing
- ISO 9000 Series
- Lab Safety Series
- Laser Safety
- Lead Safety
- Line Breaking
- Lockout/Tagout Series
- Low-Lift Trucks
- Machine Guarding
- Mechanical Power Press Safety
- Media Relations
- Motor Vehicle Awareness
- Off-the-Job Safety Series
- Office Safety
- OSHA Inspection Series
- Performance Appraisals
- Phosphoric Acid
- Pollution Prevention Series
- PPE Series
- Pro-Active Safety Series
- Process Safety Series
- RCRA
- Respiratory Protection Series
- Rope Rescue Series
- Safety Orientation
- Sexual Harassment
- Slips, Trips & Falls
- Stairways and Ladders
- Static Electricity
- Substance Abuse Prevention Series
- Teamwork
- Time Management
- Train the Trainer Series
- Trenching & Shoring Series
- Tuberculosis Awareness
- Walking & Working Surfaces
- Welding Safety Series
- Winter Safety Series
- Workplace Violence

ILLUSTRATED HANDBOOKS FROM COASTAL

- Asbestos Series
- Back Safety
- Bloodborne Pathogens for Schools
- Bloodborne Pathogens Series
- Chemical Handling Series
- Chlorine Safety
- Confined Space Series
- Contractor Safety
- Driving Safety Series
- DOT Drug & Alcohol Testing
- Electrical Safety Series
- Environmental Series
- Ergonomics Series
- Eye Protection
- Fall Protection Series
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- First Aid on the Job
- Foot Protection
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- Time Management
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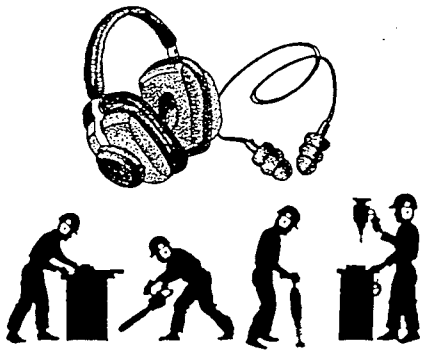
- Tuberculosis Awareness
- Vacation/Summer Safety
- Video Display Terminals
- Walking & Working Surfaces
- Warehouse Safety
- Winter Safety Series
- Workplace Violence

Hearing Protection:
A Sound Practice



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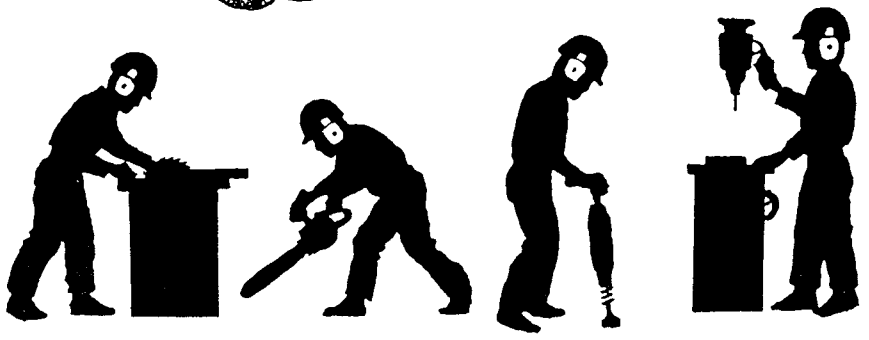
Hearing Protection:

A Sound Practice



HEARING PROTECTION

This employee handbook is one of a series of fully-illustrated employee handbooks and broadcast-quality video training programs produced by Coastal Video Communications Corporation. Each handbook and program is the result of painstaking analysis, design, development and production by the training specialists and technical specialists on our staff.

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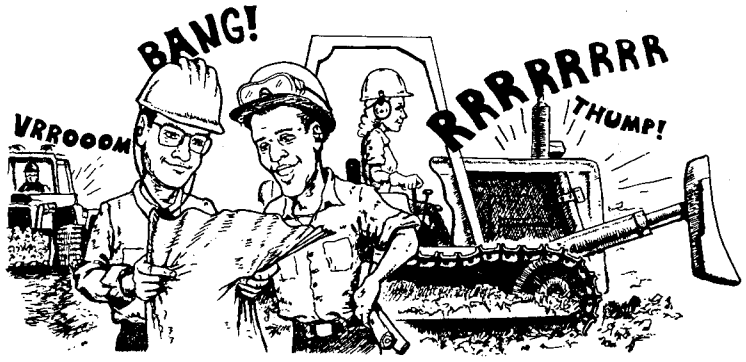
CONTENTS

INTRODUCTION

When working in an environment where there is excessive, unwanted noise, it is necessary to wear some type of hearing protection. The human ear has no defense mechanism to block out unwanted noise. Therefore, if you choose not to wear hearing protection, your hearing will be destroyed slowly, painlessly and without knowing it, until it is too late.

This handbook explains what hazardous noise levels are, how the ear works and the importance of hearing protection.

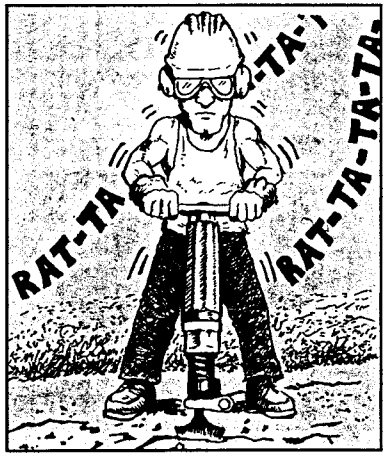


WHAT IS NOISE?

A technical definition of noise or sound is vibratory energy or waves of motion.

Most industrial noise is categorized as:

■ Continual and steady, like grinders or lathes



■ Impulse noise or sharp outbursts of noise, like noisy presses or pneumatic tools.

HEARING PROTECTION

There are two types of hearing protection:

EARPLUGS

- Earplugs must fit tightly in the ear canal so that no air can get through.
- Your hands must be clean before inserting earplugs.
- Earplugs must be checked and adjusted as the ear canal and outer ear expand throughout the day.

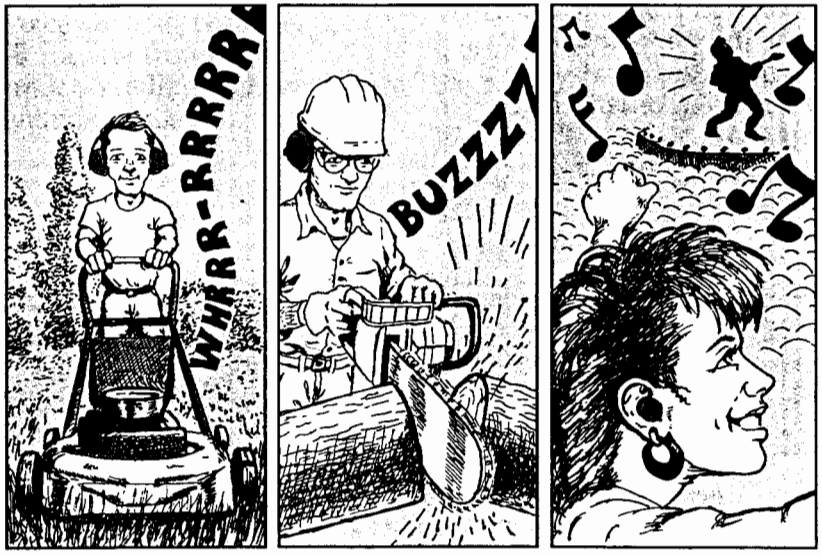
EARMUFFS

- Earmuffs must form a proper seal around the ear for them to protect you from hearing loss.
- Hair and earrings should be pushed aside or removed so as to insure this proper seal.
- Glasses can break the seal of earmuffs; so use caution and check the fit.

MAXIMUM PROTECTION

For maximum protection, wearing both earplugs and earmuffs may be necessary to reduce noise below the critical range of 85 decibels. However, with this combination, the worker must be assured that any necessary communication can be heard in the workplace such as machine warning sounds, and directions from co-workers.

Hearing protection is recommended when performing various tasks in the home such as when working with lawn mowers, chain saws, and even during leisure activities such as motor car events or concerts. Don't think that headsets on radios or cassette players lessen the surrounding noise.



WHEN DO YOU NEED PROTECTION?

■ Hearing protection is needed when there is a steady or impulse noise which makes it difficult to communicate verbally or when you occasionally work in or walk in an especially noisy area.

■ If there are signs in your workplace that tell you hearing protection is needed, then you are advised to obey this advice.

These three things will indicate the need for hearing protection from the source of noise in your workplace:
■ Loudness
■ Duration or length of exposure
■ Distance from the source.

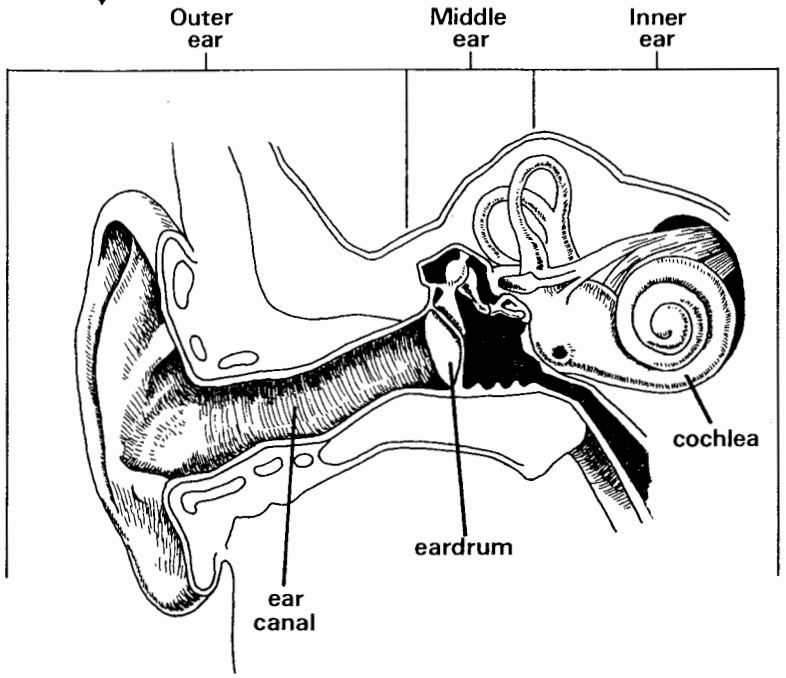
SIGNS OF HEARING LOSS

Several signs of hearing loss are:
■ Failing to catch words or phrases
■ Ringing in the ears, known as tinnitus

■ Shouting or raising your voice without realizing it
■ Having trouble understanding high frequency sounds in speech.

Don't think that you will get used to a high noise level, especially if there are signs that advise the wearing of hearing protection. In reality you will only be losing your hearing.

THE EAR



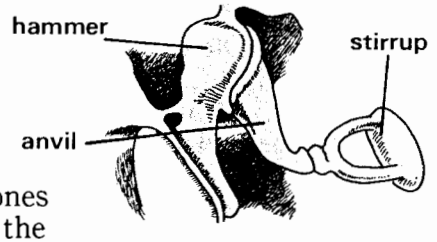
There are three main sections of the ear:
- The outer ear
- The middle ear
- The inner ear.

OUTER EAR

The outer ear has only one function: to direct sound waves into the ear canal which leads to the eardrum. The eardrum passes this vibration on to the middle ear.

MIDDLE EAR

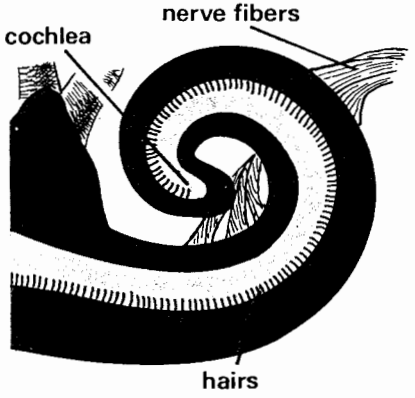
The middle ear contains the three smallest bones in the body:
- The hammer
- The anvil
- The stirrup.



The vibration moves the bones and passes sound waves to the inner ear.

INNER EAR

The inner ear contains a fluid-filled mechanism called the cochlea. Inside are thousands of tiny hair cells that respond to vibrations the sound waves make in the fluid. The hair cells pass the sensations on to the nerve fibers in the auditory nerve.

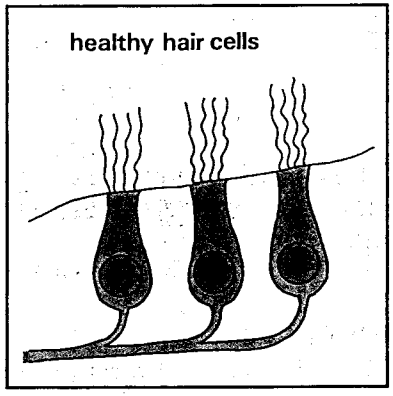


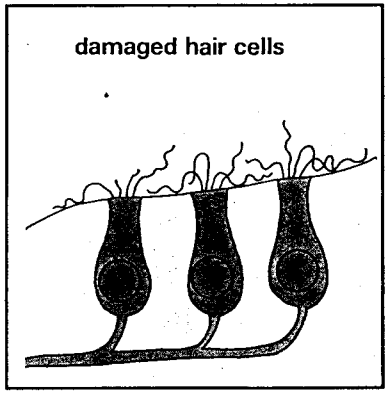
SENSORI-NEURAL HEARING LOSS

The inner ear is the place where noise does its damage. Noise-induced hearing loss is a *sensori-neural hearing loss.*

Sensori-neural hearing loss results from damage to the hair cells or auditory nerves.

■ If the exposure to excessive noise is stopped, then in time the hair cells will bounce back and the damage will only be temporary.





■ However, if there is continual exposure to excessive noise, the hair cells lose their ability to bounce back and the hearing damage becomes permanent.

DECIBEL READINGS

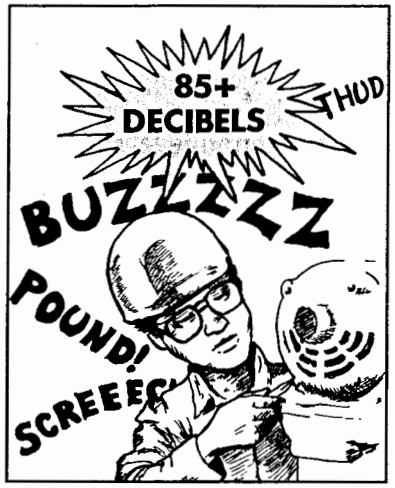
■ Three decibels is the smallest change in sound the ear can perceive.
■ The critical range where hearing can be damaged painlessly is between 85 and 125 decibels.
■ If the sound level increases by five decibels, the amount of time you should spend on the job is cut in half.

A ten decibel increase in sound level doubles the apparent loudness. For example a 90-decibel reading sounds twice as loud as an 80-decibel reading.

■ A normal conversation is measured roughly at 65 decibels.
■ A power saw is approximately 110 decibels.
■ A jet taking off within 100 feet is 145 decibels.

WHEN IS NOISE DANGEROUS?

A Sound Level Meter measures decibels or units of sound. Prolonged exposure to sound levels greater than 85 decibels will result in hearing loss. Continued exposure to excessive noise without hearing protection can impair your job performance causing irritability, fatigue and stress.



MEDICAL TESTING

An audiometric examination is an effective tool for early detection of hearing loss. The result of the test is called the audiogram. The first test is known as the baseline, which establishes the endurance level or threshold for each ear. Future audiograms will determine if there are any changes or shifts in your hearing ability.

NOISE REDUCTION IDEAS

Some sources of unwanted noise cannot be stopped or avoided, but there are ways to control noise exposure:

- Install acoustical barriers or panels.
- Redesign or enclose machinery.
- Limit exposure time to the noise source.
- Wear hearing protection.

SUMMARY

Hearing protection is a necessary defense against hearing loss when you work around loud noise. Steady and impulse noise can slowly destroy your hearing painlessly without you knowing it.

Earplugs and earmuffs can make the difference in preventing permanent damage to your ears. Wear the proper hearing protection as you would other personal protective equipment on your job.

QU

1. True False The human ear has two major defense mechanisms to block out unwanted noise.
2. True False Sound can be defined as vibratory energy or waves of motion.
3. True False Most industrial noise falls into two categories, loud noise and hazardous noise.
4. True False If you need to raise your voice to be heard by someone less than two feet away you should be wearing hearing protection.
5. True False Signs in your workplace requiring hearing protection are only for people who wear hearing aids.
6. True False Loudness, length of exposure and distance from the source determine if a noise is hazardous enough to damage your hearing.
7. True False Prolonged exposure to sound levels above 85 decibels will result in hearing loss.
8. True False A 90 decibel sound isn't much louder than an 80 decibel sound.
9. True False The range where hearing can be painlessly damaged is between 95 and 175 decibels.
10. True False The eardrum sends sound waves to the outer ear.
11. True False The middle ear is made up of three tiny bones.
12. True False Sensori-neural hearing loss results from permanent damage to the hair cells in the inner ear.

13. True False Tinnitus is a tingling in the ears caused by wearing earplugs.

14. True False Raising your voice in casual conversation without knowing it is a possible sign of hearing loss.

15. True False Earplugs should be worn tightly and require no adjustment throughout the day.

16. True False Earmuffs should be worn loosely to allow proper ventilation.

17. True False You should wear either earplugs or earmuffs, never both together.

18. True False The noise from your lawn mower at home can affect your hearing just as much as noise at work.

19. True False Only one audiometric examination is necessary to determine if there has been a hearing loss.

20. True False Exposure to unwanted sound can be controlled.

ACKNOWLEDGEMENT OF TRAINING

I have read and understand the training handbook, **Hearing Protection.** I have also completed and passed the comprehensive quiz at the conclusion of the handbook.

_____ _____

Employee's Signature Date

_____ _____

Supervisor's Signature Date

NOTE: This record may be included in the employee's personnel or training file.

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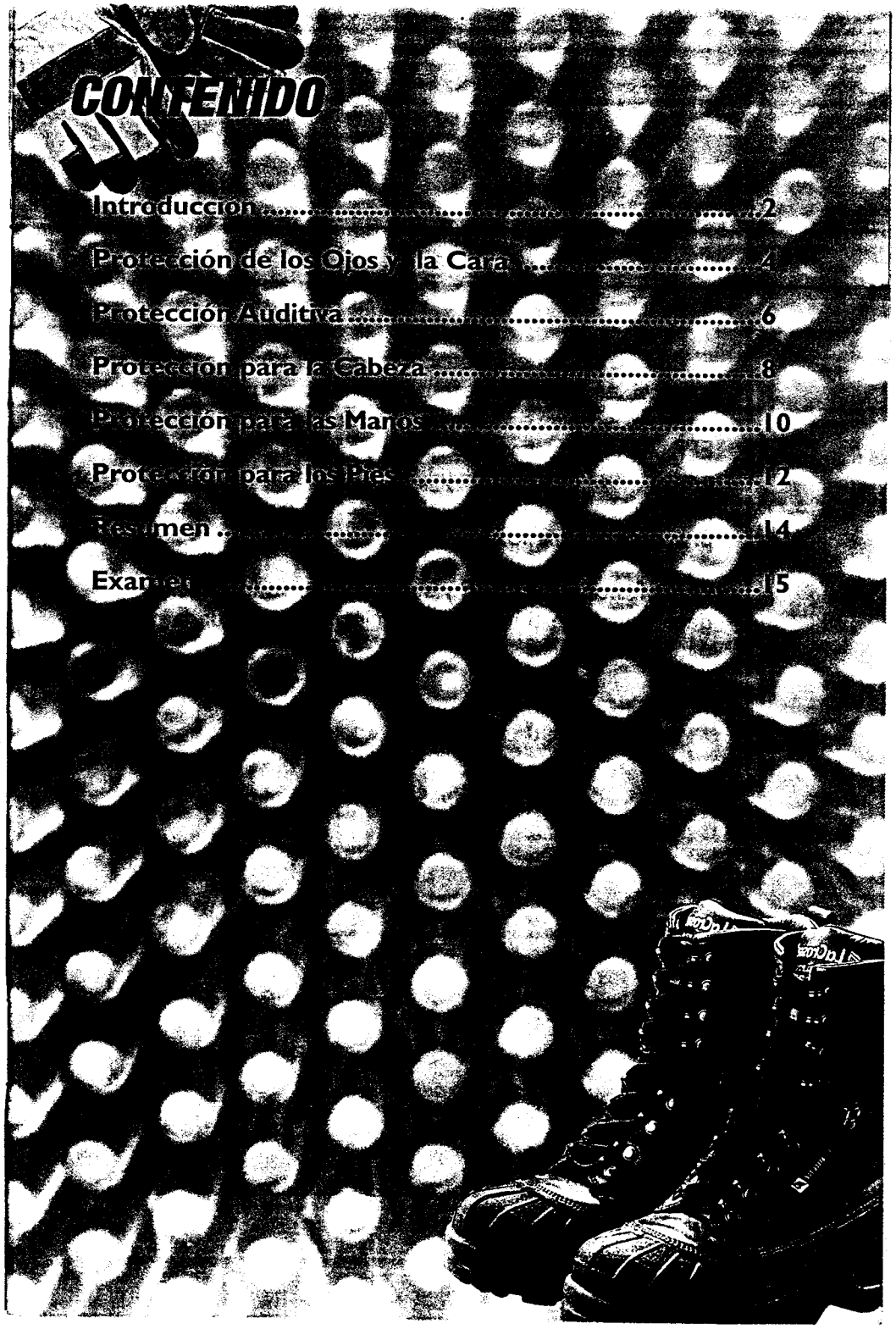


INTRODUCCIÓN

El Equipo de Protección Personal (EPP) le protege contra los accidentes. Las diferentes partes de su cuerpo y los diferentes tipos de riesgos requieren diferentes formas de EPP. Algunas formas comunes de EPP incluyen la protección de los ojos y la cara, protección auditiva, protección para la cabeza, protección para las manos y protección para los pies.

El profesional de salud y seguridad de su instalación determina qué tipo de protección es la adecuada para usted al:

- Identificar los riesgos en su área de trabajo
- Proporcionarle el EPP adecuado para protegerle de esos riesgos
- Capacitarle en el uso y el cuidado del EPP.

Siempre utilice el equipo adecuado para el trabajo y utilícelo correctamente. Inspeccione el EPP en busca de daño antes y después de usarlo y límpielo cuando termine de trabajar. Reemplace todo el equipo que esté defectuoso y siga las reglas de seguridad de su empleador en todo momento.

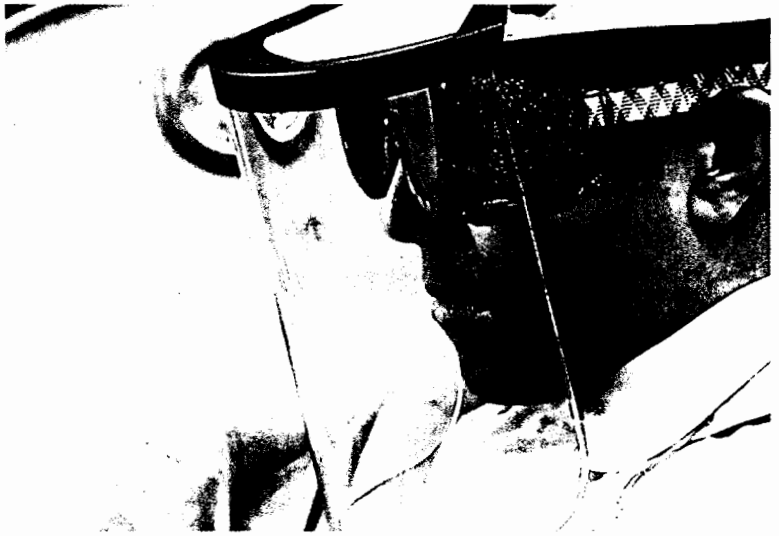
PROTECCIÓN DE LOS OJOS Y LA CARA

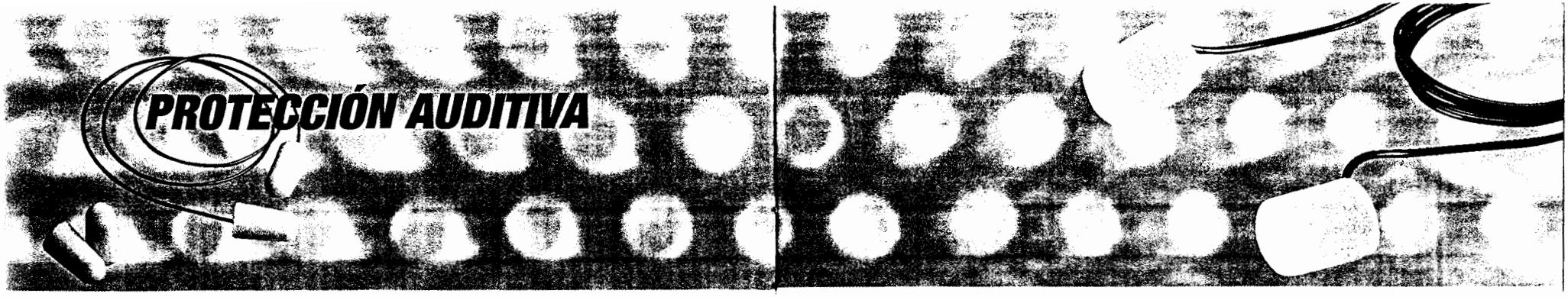
Hay cinco tipos básicos de protección para los ojos y la cara: gafas de seguridad, gafas protectoras, caretas de protección, cascos para soldadura y protección de los ojos láser.

Utilizar la protección de los ojos correctamente es tan importante como seleccionar el equipo correcto. Las gafas de seguridad, que proporcionan protección frontal y en los lados, deben ajustarse bien a su cabeza y asentarse cómodamente en el puente de su nariz. Las gafas protectoras, que pueden utilizarse por encima de los lentes graduados o de las gafas de seguridad, también deben ajustar bien y sellar toda el área alrededor del ojo.

Las caretas de protección, los cascos para soldadura y las gafas láser también deben acomodarse a su cara de manera cómoda y ajusta'da. Tanto las caretas como los cascos deben asentarse de manera paralela al frente de su cabeza y los lados deben estar a la misma distancia de su cara. Siempre use gafas de seguridad o gafas protectoras debajo de estos artículos para mayor protección.

Las lentillas de contacto y los lentes fototrópicos o de polarización variable a menudo están prohibidos en algunos ambientes de trabajo, así que consulte con el encargado de seguridad de su instalación acerca de las reglas de su empleador.





PROTECCIÓN AUDITIVA

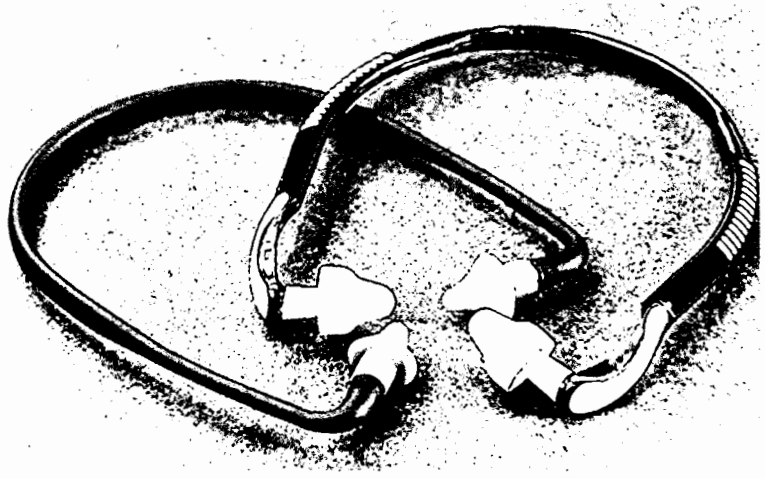
Para protegerse de la exposición repetida al ruido excesivo, use tapones para los oídos, bandas de protección auditiva u orejeras. Es necesario utilizar esta protección siempre que vea letreros de advertencia o etiquetas que identifiquen al área como una zona de peligro auditivo o si necesita elevar la voz para que le escuche una persona que se encuentra a menos de sesenta centímetros.

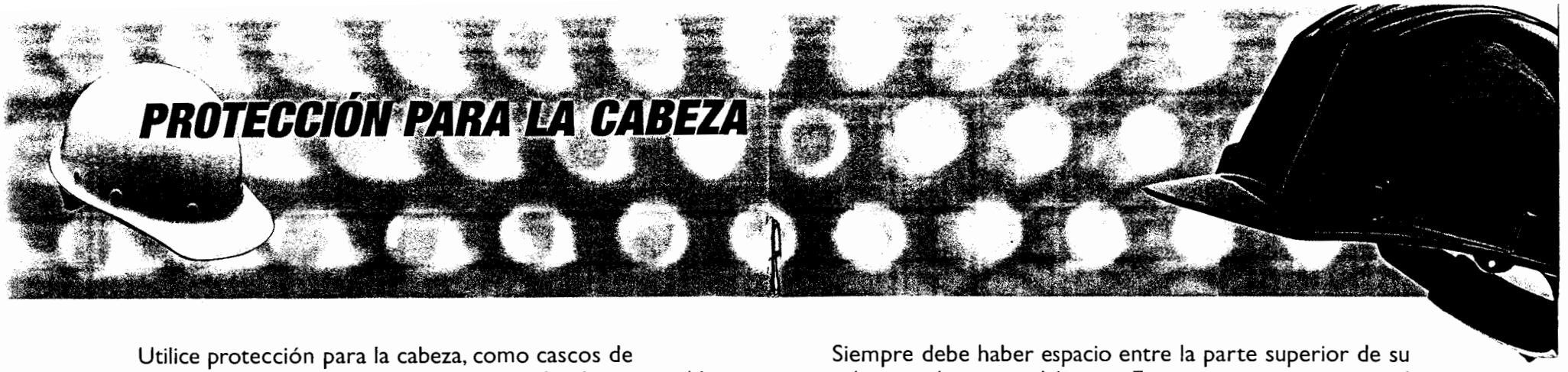
Los tapones desechables están hechos de diferentes tipos de materiales. Entre más denso sea el material, mayor será la protección del nivel de ruido. Lave sus manos antes de insertarse los tapones en los oídos. Después, enrolle los tapones para que tomen una forma alargada pequeña. Estire su oreja hacia atrás y hacia arriba e inserte el tapón en el canal auditivo. Sosténgalo adentro durante algunos segundos para lograr un buen ajuste y después revise los tapones cada dos horas para asegurarse de que sigan sellando bien.

Ya que las bandas de protección auditiva tienen su propio sistema de suspensión, pueden portarse arriba de la cabeza, atrás del cuello o debajo de la barbilla. Los tapones están disponibles en espuma y silicón.

Las copas de las orejeras están rellenas de líquido o espuma. Cuando se usan con tapones, ofrecen la mejor protección contra el ruido y los desechos transportados en el aire. Asegúrese de que la copa selle bien alrededor de su oreja. Mueva o retire cualquier cosa que interfiera con el sellado, como el cabello o los aretes.

Descarte los tapones desechables tan pronto como se los retire. Almacene la protección auditiva reutilizable lejos de sustancias y condiciones dañinas después de limpiarla.





PROTECCIÓN PARA LA CABEZA

Utilice protección para la cabeza, como cascos de seguridad, siempre que trabaje en áreas donde sea posible que objetos caigan o vuelen y cuando trabaje cerca de conductores eléctricos expuestos y maquinaria en movimiento. Los cascos de seguridad aprobados deben soportar hasta 18 kilogramos de impacto.

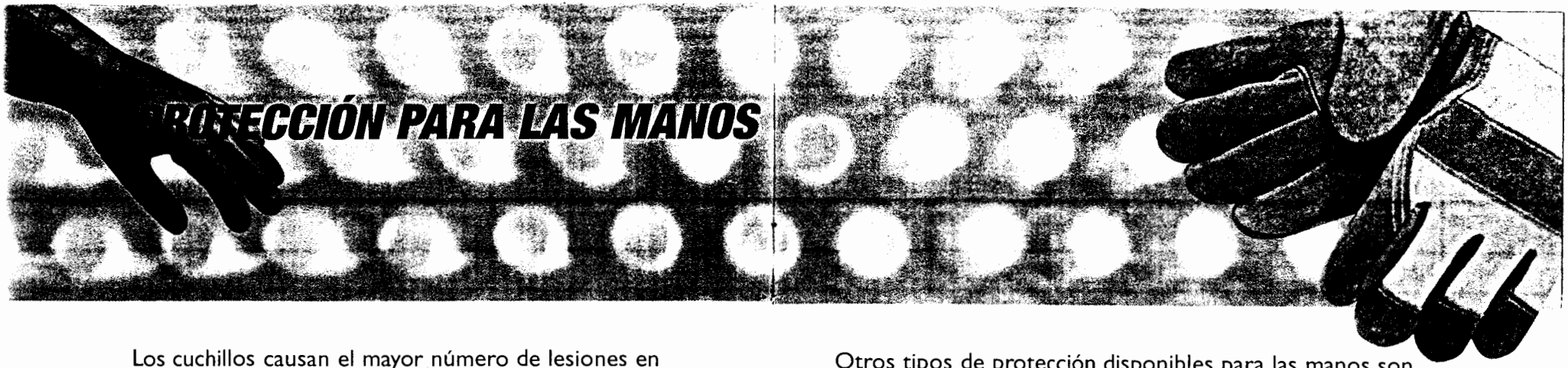
Los cascos de seguridad de tipo I sólo protegen la parte superior de su cabeza. Los cascos de tipo II absorben la fuerza de impacto lateral, frontal, de lado, posterior y superior. Ambos tipos se dividen en tres clases dependiendo de sus capacidades específicas de protección:

- La clase C protege contra objetos que caen, pero no contra riesgos eléctricos
- La clase E protege contra el alto voltaje y el impacto
- La clase G protege contra el bajo voltaje y el impacto.

El equipo de protección para la cabeza para trabajo especializado incluye sistemas de cascos con suministro de aire para trabajar en atmósferas peligrosas.

Siempre debe haber espacio entre la parte superior de su cabeza y el interior del casco. Este espacio permite que el sistema de suspensión absorba el impacto y que circule el aire. Asegúrese de que el casco esté sobre su cabeza paralelo al suelo, no inclinado hacia arriba o hacia abajo. Verifique que ajuste bien, doblándose hacia el frente con el casco puesto y sacudiendo su cabeza. El casco no debe caerse debido a su propio peso.

Nunca deje caer, arroje, pinte o taladre agujeros en un casco de seguridad y no lo deje en la luz del sol directa. Estas acciones pueden debilitar el armazón. Además, lave el sistema de suspensión cada mes y reemplácelo cada año.



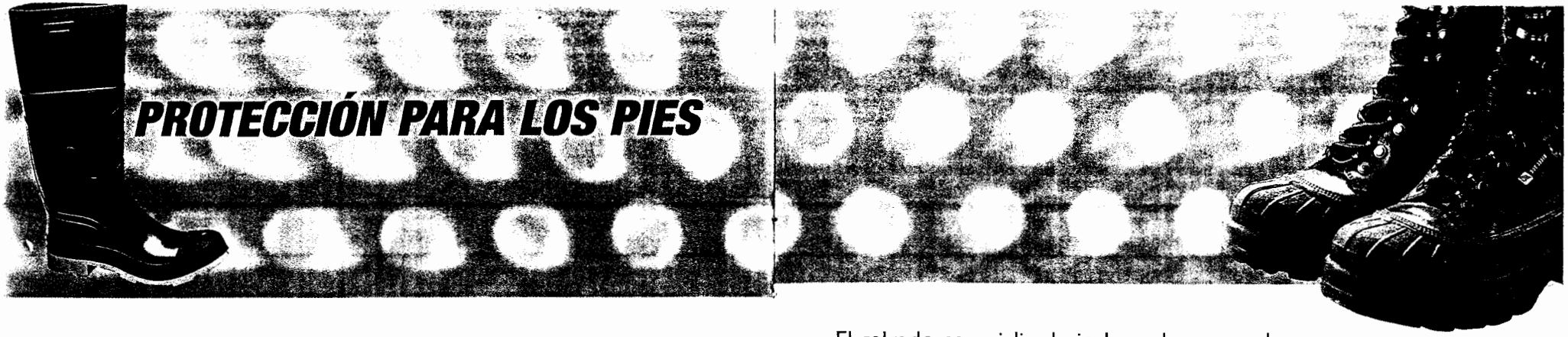
PROTECCIÓN PARA LAS MANOS

Los cuchillos causan el mayor número de lesiones en las manos, pero trabajar cerca de químicos, materiales abrasivos o corrosivos, equipo eléctrico, puntos calientes de maquinaria y herramientas manuales también puede ser peligroso. Utilice los guantes adecuados cuando sea necesario.

Los guantes de vinilo, hule o neopreno son los mejores para trabajar con químicos. Use guantes sintéticos cuando trabaje con productos con base de petróleo. Los guantes de cuero o algodón son los indicados para manejar la mayoría de los materiales abrasivos. Y los guantes reforzados con grapas de metal le protegen de los objetos punzocortantes. Use guantes para electricista diseñados para el trabajo que esté realizando. Si es necesario, use un guante que sea de una clase más alta de la que necesita, nunca más baja.

Otros tipos de protección disponibles para las manos son los guantes desechables y resistentes a la temperatura y las mangas protectoras.

Almacene los guantes especiales en áreas donde estén protegidos de la luz, de los extremos de temperatura, de la humedad excesiva, del ozono y de otras sustancias y condiciones dañinas.



PROTECCIÓN PARA LOS PIES

El calzado de seguridad le protege de la compresión, el impacto, las punciones y los químicos. La protección para los pies aprobada está etiquetada con clasificaciones de compresión e impacto específicas. Elija la clasificación correcta que sea equivalente a o que exceda los kilogramos de presión a los que sus pies podrían someterse.

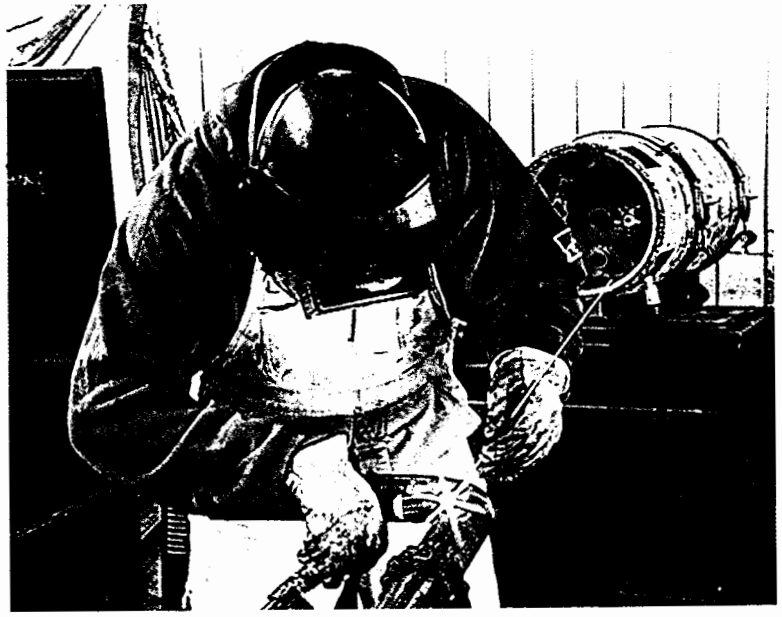
Los tipos de EPP para los pies incluyen cubrebotas, botas de caña alta, zapatos o botas de trabajo o artículos especializados. Los cubrebotas, hechos de neopreno, hule natural, látex o vinilo, se colocan sobre los zapatos de trabajo para una protección completa. Las botas de caña alta proporcionan protección para todo el día sin zapatos o botas adicionales. Los zapatos y las botas de trabajo son para uso a largo plazo alrededor de maquinaria pesada y condiciones de humedad, de lodo, de bajas o de altas temperaturas.

El calzado especializado incluye clavos y cadenas, calcetines y forros térmicos, y protectores para piernas, pies y metatarsos. También hay calzado diseñado para protegerle contra los riesgos de explosión y eléctricos y para mantenerle libre de la electricidad estática. Para trabajar alrededor del agua, de químicos, aceite o grasa, use protección para pies hecha de hule o plástico con suelas antiderrapantes y resistentes al aceite.

Use calcetines 100 por ciento de algodón limpios y secos debajo de la protección para los pies. Si cualquier componente de su calzado se humedece, déjelo secar antes de volvérselo a poner.

RESUMEN

Es su responsabilidad usar el EPP en el momento indicado. Si lo hace, el equipo le protegerá de numerosos riesgos de trabajo. Sólo recuerde inspeccionar todo el EPP en busca de daño antes y después de usarlo, y límpielo cuando haya terminado de trabajar. Siempre siga las reglas de seguridad de su empresa y recuerde usar su EPP.



EXAMEN

1. Verdadero Falso Utilizar el EPP equivocado, o usarlo de forma incorrecta, es peligroso.
2. Verdadero Falso Es responsabilidad del profesional de salud y seguridad de su instalación el que usted use o no su EPP.
3. Verdadero Falso Las gafas de seguridad proporcionan protección frontal y de lado para sus ojos.
4. Verdadero Falso Si elige la protección de los ojos correcta, no debe preocuparse por usarla correctamente.
5. Verdadero Falso Las caretas de protección y los cascos deben colocarse paralelo al frente de su cabeza, y los lados deben estar a la misma distancia de su cara.
6. Verdadero Falso Las gafas protectoras no deben usarse encima de los lentes graduados.
7. Verdadero Falso Si debe elevar la voz para que le escuche alguien que se encuentra a menos de dos metros de distancia, necesita protección auditiva.
8. Verdadero Falso Entre más denso sea el material de los tapones, mayor será la protección del nivel de ruido.
9. Verdadero Falso Antes de insertar los tapones en sus oídos, límpiese el conducto auditivo.
10. Verdadero Falso Asegúrese de que las copas de las orejeras formen un buen sello alrededor de su oreja.
11. Verdadero Falso Necesita protección para la cabeza solamente cuando hay posibilidad de que haya objetos que caigan o vuelen.
12. Verdadero Falso Los cascos de tipo I absorben la fuerza de impacto lateral, frontal, de lado, posterior y superior.

EXAMEN

13. Verdadero Falso Los cascos de seguridad de Clase C le protegen del impacto.

14. Verdadero Falso Los cascos de seguridad de Clase E le protegen de los riesgos eléctricos de bajo voltaje así como del impacto.

15. Verdadero Falso Para usar correctamente un casco de seguridad, debe quedar un espacio entre la parte superior de su cabeza y el interior del casco.

16. Verdadero Falso Asegúrese de siempre pintar su nombre en su casco de seguridad para facilitar la identificación.

17. Verdadero Falso Los cuchillos causan el mayor número de lesiones en las manos.

18. Verdadero Falso Cuando sea necesario, use guantes de electricista de una clase más alta de la que necesita, nunca de una clase más baja.

19. Verdadero Falso Elija calzado con clasificación de compresión e impacto que sea equivalente o que sea menor a los kilogramos de presión a los que sus pies podrían someterse.

20. Verdadero Falso Los zapatos y las botas de trabajo son para situaciones a largo plazo alrededor de maquinaria pesada y condiciones de humedad, de lodo, de bajas o de altas temperaturas.

RECONOMICIMIENTO DE CAPACITACIÓN

He leído y comprendo el manual de capacitación, *EPP: No empiece a trabajar sin él.* También he llenado y pasado el examen integral al final del este manual.

Firma del Empleado _____ Fecha _____

Nombre del Entrenador _____ Fecha _____

NOTA: Este registro puede incluirse en el archivo de personal o de capacitación del empleado.

PROGRAMAS EN VIDEO DISPONIBLES EN ESPAÑOL A TRAVES DE COASTAL

- Entrada a los Espacios Cerrados
- Protección de la Espalda: Cómo Defender su Zona de Seguridad
- Documentos de Embarque Para Materiales Peligrosos
- Etiquetas y Señales de Advertencia: Reciba el mensaje
- Transportación de Materiales Peligrosos
- Los Equipos de Protección Personal: Vida Real
- Patógenos Transportados por la Sangre: El Factor Humano
- Trabajo en Equipo: El Exito de la Sinergia
- Buenas Prácticas de Manufactura: La Seguridad de los Alimentos está en sus Manos
- Las 12 Violaciones Más Comunes a la OSHA
- Equipos Autónomos de Trabajo: Cómo Realizarlos
- Diversidad: Una Valiosa Reflexión
- Motivación Para Los Empleados: El Camino al Exito
- Seguridad ProActiva: Las Auto-Inspecciones de Seguridad
- Seguridad Primero
- Ergonomía: Rompa el Hábito de Las Lesiones por Movimientos Repetitivos
- Serie Entrenado al Entrenador
- Andamios: Seguridad a Todos los Niveles
- Los Gases Comprimidos
- ISO 9000 e ISO 14000
- Los Equipos de Protección Personal
- El Aseguramiento y la Colocación de Avisos
- Serie Sobre el Trabajo con Desperdicios Peligrosos
- La Prevención de la Polución
- La Seguridad con el Cloro
- El Control de los Peligros del Asbesto
- La Seguridad en El Almacen
- Los Primeros Auxilios
- Excavación y Apuntalamiento de Zanjas
- La Excavación de Zanjas
- Protección Contra las Caídas
- Serie Sobre la Seguridad con la Soldadura
- La Seguridad con el Plomo
- Los Cargadores Industriales
- La Comunicación de los Peligros
- La Electricidad Estática
- La Seguridad en el Laboratorio
- Las Grúas de Interiores
- La Interrupción de Líneas
- La Espalda: Postura, Mecánica y Ejercicio
- La Fatiga Causada por el Calor
- La Seguridad del Contratista
- La Ergonomía
- Manejo Defensivo
- Serie Sobre el Desarrollo Sostenible
- Serie Sobre los Generadores Eléctricos
- La Seguridad con las Prensas Mecánicas
- Electricidad: !Cuidado con la Picada!
- Derrumbes
- Reporte de Incidentes
- Los Derrames Menores
- La Seguridad en Caso de Fuego
- El Cloro
- El Manejo de Químicos
- Gruas de Interior
- Agentes Patógenos de la Sangre: Casos de la Vida Real
- Agentes Patógenos de la Sangre (Hospitales)
- Los Patógenos de la Sangre (Escuelas)

FOLLETOS DISPONIBLES EN ESPAÑOL

- La Seguridad con el Asbesto
- La Seguridad con la Espalda
- La Entrada a los Espacios Confinados
- Evitando los Peligros Eléctricos
- ¡Fuego! No Hay Una Segunda Oportunidad
- La Ergonomía
- La Protección de sus Ojos
- La Seguridad con los Montacargas
- La Protección del Sistema Auditivo
- El Aseguramiento y la Colocación de Avisos
- La Protección Personal Contra las Caídas
- Los Equipos de Protección Personal
- Los Patógenos de la Sangre: Protéjase Usted Mismo
- La Calidad Total: Cero Accidentes
- La Comunicación de los Peligros
- La Seguridad con los Rayos Láser
- La Protección Respiratoria
- La Seguridad con sus Manos
- La Seguridad en los Hoteles
- La Seguridad: Una Actitud Triunfante
- Los Primeros Auxilios
- Las Actitudes Pro-Activas de Seguridad
- Los Gases Comprimidos
- Mantenimiento de las Areas Verdes
- La Seguridad del Contratista
- Las Barreras de Protección
- Los Resbalos, Tropiezos y Caídas
- Manejo Defensivo
- Violencia en el Trabajo
- El Reporte de Incidentes